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DRUG DESIGN BASED ON THE STRUCTURE OF LTA_4 HYDROLASE

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Respectfully submitted,

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DRUG DESIGN BASED ON THE STRUCTURE OF LTA_4 HYDROLASE

1. BACKGROUND

1.1 Technical field

The present invention relates to methods of design or identification of biologically active compounds, which methods are based on the first definition ever of a three-dimensional structure of a protein involved in the leukotriene cascade. Further, the invention relates to novel compounds obtained by said methods, to advantageous uses of such compounds as well as to processes for the preparation thereof.

1.2 Prior art

Leukotriene A4 (LTA_4) hydrolase is a pivotal enzyme in the biosynthesis of leukotrienes, a family of paracrine hormones implicated in the pathophysiology of inflammatory and allergic disorders, in particular bronchial asthma (Samuelsson, B. *Science* **220**, 568-75 (1983); and Lewis, R.A., Austen, K.F. & Soberman, R.J. *N Engl J Med* **323**, 645-55 (1990)). Leukotrienes are formed by immunocompetent cells including neutrophils, eosinophils, basophils, mast cells, and macrophages, in response to a variety of immunological as well as non-immunological stimuli. These lipid mediators are divided into two major classes exemplified by the chemotaxin LTB4, and the spasmogenic cysteinyl-leukotrienes (LTC4, LTD4, and LTE4). Leukotriene biosynthesis is initiated by the enzyme 5-lipoxygenase which converts arachidonic acid into the unstable epoxide LTA4, a central intermediate in the leukotriene cascade. LTA4 may in turn be hydrolyzed into LTB4 by the enzyme LTA4 hydrolase, or conjugated with GSH to form LTC4, a reaction catalyzed by a specific LTC4 synthase. During cellular activation, all key enzymes in leukotriene biosynthesis, except LTA4 hydrolase, form a biosynthetic complex assembled at the nuclear membrane, suggesting that leukotrienes may have unknown intranuclear functions related to gene regulation or cell growth (Serhan, C.N., Haeggstrom, J.Z. & Leslie, C.C. *Faseb J* **10**, 1147-58 (1996)).

Leukotriene B4, the natural product of LTA4 hydrolase, is one of the most powerful chemotactic agents known to date and triggers leukocyte adherence and aggregation at only nM concentrations (Ford-Hutchinson, A.W., Bray, M.A., Doig, M.V., Shipley, M.E. & Smith, M.J.H. *Nature* **286**, 264-265 (1980)). Hence, this molecule is regarded as a key mediator of inflammation, and has been implicated in a number of diseases, including arthritis, psoriasis, inflammatory bowel disease (IBD), and chronic obstructive pulmonary disease (COPD). Furthermore, the role of LTB4 in inflammation has been well corroborated by the anti-inflammatory properties of LTA4 hydrolase inhibitors, particularly in combination with a cyclooxygenase inhibitor, and specific LTB4 receptor antagonists, as well as the reduced inflammatory reactions observed in several animal models of leukotriene deficiency (Tsuji, F., Miyake, Y., Enomoto, H., Horiuchi, M., Mita, S. *Eur. J. Pharmacol.* **346**, 81-85, (1998); Chen, X.S., Sheller, J.R., Johnson, E.N. & Funk, C.D. *Nature* **372**, 179-182 (1994); Griffiths, R.J., *et al. Proc Natl Acad Sci U S A* **92**, 517-21 (1995); and Griffiths, R.J., *et al. J Exp Med* **185**, 1123-9 (1997)). In addition, LTB4 modulates the immune response, *e.g.,* by interference with specific subsets of lymphocytes, production of cytokines, as well as liberation of immunoglobulins from B-lymphocytes (Payan, D.G., Missirian-Bastian, A. & Goetzl, E.J. *Proc Natl Acad Sci U S A* **81**, 3501-5 (1984); Rola-Pleszczynski, M. & Lemaire, I. *J Immunol* **135**, 3958-61 (1985); and Yamaoka, K.A., Claesson, H.E. & Rosen, A. *J Immunol* **143**, 1996-2000 (1989)). Recent data also indicate that LTB4 stimulates, and thus has a crucial role in the regulation of, cell proliferation and cell survival in HL-60 cells, suggesting that LTA4 hydrolase inhibitors may have an anti-proliferative effect. (Dittman, K.H., Mayer, C., Rodemann, H.P., Petrides, P.E., and Denzlinger, C. *Leuk. Res.* **22**, 49-53 (1998)). The cell surface receptor for LTB4 (BLTR) was recently cloned and found to be abundantly expressed in the immune system, including lymphocytes, spleen and thymus (Yokomizo, T., Izumi, T., Chang, K., Takuwa, Y. & Shimuzu, T. *Nature* **387**, 620-624 (1997)). BLTR belongs to a family of chemokine receptors and, interestingly, together with CD4 it was found to be an efficient coreceptor for HIV-1 infection (Owman, C., *et al. Proc Natl Acad Sci U S*

A **95**, 9530-4 (1998)). Moreover, LTB4 is also a natural ligand to the nuclear orphan receptor PPARα, suggesting that LTB4 may have intranuclear functions possibly related to lipid homeostasis (Devchand, P.R., *et al. Nature* **384**, 39-43 (1996)).

LTA4 hydrolase is a cytosolic 69 kDa enzyme without any similarity to other soluble or membrane bound xenobiotic epoxide hydrolases (Funk, C.D., *et al. Proc Natl Acad Sci U S A* **84**, 6677-81 (1987)). The enzyme's epoxide hydrolase activity, which generates LTB4, is highly substrate selective accepting only LTA4 and to a small extent the double bond isomers LTA3 and LTA5. Typically, LTA4 hydrolase undergoes suicide inactivation and covalent modification when exposed to LTA4 (Evans, J.F., Nathaniel, D.J., Zamboni, R.J. & Ford-Hutchinson, A.W. *J. Biol. Chem.* **260**, 10966-10970 (1985)). During this process, LTA4 apparently binds to Tyr-378, a residue which also seems to play a role for the formation of the critical *cis-trans-trans* geometry in the conjugated triene structure of LTB4 (Mueller, M.J., *et al. Proc Natl Acad Sci U S A* **93**, 5931-5935 (1996); and Mueller, M., Andberg, M., Samuelsson, B. & Haeggstrom, J. Z. *J. Biol. Chem.* **271**, 24345-24348 (1996)).

From sequence comparisons with certain metalloproteases and aminopeptidases, a zinc binding motif (HEXXH-X_{18}-E) was unexpectedly found in LTA4 hydrolase (Vallee, B.L. & Auld, D.S. *Proc. Natl. Acad. Sci. USA* **87**, 220-224 (1990)). Further studies demonstrated that the enzyme indeed contains one catalytic zinc atom complexed to His295, His299, and Glu318 (Medina, J.F., *et al. Proc. Natl. Acad. Sci. USA* **88**, 7620-7624 (1991)). In addition, a previously unknown peptide cleaving activity was discovered which requires the presence of anions, particularly chloride (Haeggström, J.Z., Wetterholm, A., Medina, J.F. & Samuelsson, B. *J Lipid Mediator* **6**, 1-13 (1993)). Although the endogenous physiological peptidase substrate(s) has not yet been identified, LTA4 hydrolase cleaves certain arginyl di- and tripeptides with very high efficiency (Örning, L., Gierse, J.K. & Fitzpatrick, F.A. *J. Biol. Chem.* **269**, 11269-11273 (1994)). Hence, LTA4 hydrolase can be described as a

bifunctional zinc metalloenzyme with the unique ability to accept both lipid and peptide substrates. Using site-directed mutagenesis, Glu296 and Tyr383 were found to be critical for the peptidase reaction, presumably as a general base and proton donor, respectively (Blomster, M., Wetterholm, A., Mueller, M.J. & Haeggström, J.Z. *Eur. J. Biochem.* **231**, 528-534 (1995); and Wetterholm, A., *et al. Proc Natl Acad Sci U SA* **89**, 9141-9145 (1992)). Since the enzyme's ability to convert LTA4 into LTB4 was not affected by the mutations, the two enzyme activities of LTA4 hydrolase are exerted via non-identical but overlapping active sites. Notably, unlike other enzymes in the leukotriene cascade, LTA4 hydrolase is ubiquitous in mammalian cells and tissues suggesting that it may have other functions presumably related to its peptide cleaving activity.

As a consequence of the identification of LTA_4 hydrolase as a zinc metalloenzyme with a peptidase activity, it was observed that LTA4 hydrolase is inhibited by bestatin, a general aminopeptidase inhibitor, and captopril, an inhibitor of angiotensin converting enzyme (Örning, L., *et al. J. Biol. Chem.* **266**, 16507-16511 (1991)).

Tsuge et al., (*J. Mol. Biol.* **238**,854-856 (1994)), have described the crystallization of LTA_4 hydrolase. However, despite the well recognized need thereof, the three-dimensional structure of LTA_4 hydrolase has not yet been disclosed. More specifically, the problems that need to be overcome in order to provide such a determination may in brief be explained as follows. There are two major difficulties in obtaining a three-dimensional structure of a protein molecule. The first one is to grow crystals of good quality that are reproducible and diffract to atomic resolution (beyond 2.5Å). This means a thorough and cumbersome investigation of parameters that influence the crystal growth such as pH, temperature, nature of buffers, nature of precipitant, just to mention a few. The addition of ligands such as substrate analogues or inhibitors or the addition of other molecules can be important for obtaining good crystals. There is only little understanding of the physical

background of the crystallisation process which means that the search for suitable crystallisation conditions for a certain protein is unique, requires creativity and intuition, and is governed by trial and error procedures. The purity of the protein is also a crucial parameter in the crystallisation and a suitable degree of purity can be hard, or even imposible, to achieve. The second major difficulty is associated with overcoming the phase-problem which is inherent to X-ray diffraction methods. To be able to overcome this problem it is necessary to substitute the protein with suitable heavy atom substance such as e.g. mercury , gold or platinum compounds. Crystals often cannot withstand the treatment with these compounds and the search for suitable substitutions is not straight forward and may become very exhaustive. Another option is to substitute all methionines by seleno-methionine (Se-Met) residues. This method requires production of recombinant protein in special strains of *E. coli* under non-standard conditions, followed by a new purification and recrystallisation of the Se-Met containing protein . Although Tsuge et al reported the crystallisation of LTA4 hydrolase, their crystals only diffracted to medium resolution and the phase-problem was not solved. Thus, as a reliable definition of the three-dimensional structure of LTA_4 hydrolase would enable e.g. a display in visual form on a computer screen of the shape of the molecule, then, could the above mentioned problems be solved, a whole range of possibilities would be opened, such as rational structure-based drug design, e.g. in combination with combinatorial chemistry, aimed at production of novel medicaments useful in disorders associated with the leukotriene cascade, as well as protein-engineering to create novel variants of the enzyme with altered, but yet useful, catalytic properties.

As LTA4 hydrolase is a recognized important drug target, some inhibitors thereof have been synthesized (Wetterholm, A., *et al. J Pharmacol Exp Ther* **275**, 31-7 (1995); and Yuan, W., Wong, C., Haeggstrom, J. Z., Wetterholm, A. & Samuelsson, B. *J. Am. Chem. Soc.*, **114**, 6552-6553 (1992)). Interestingly, certain inhibitors of LTA4 hydrolase were reported to act also as LTB4 receptor antagonists (Labaudinière R, Hilboll G, Leon-Lomeli A, Terlain B, Cavy F, Parnham M, Kuhl P, and Dereu N. *J. Med. Chem.* **35**, 3170-3179 (1992)). Due to the absence of any

available information regarding the three-dimensional structure of LTA4 hydrolase, as discussed above, none of the previously described inhibitors have been designed based on the exact structure thereof. Accordingly, there is a need within this field of determining the three-dimensional structure of LTA4 hydrolase in order to design more potent and selective inhibitors of LTA4 hydrolase as well as modified structures exhibiting even more advantageous pharmaceutical properties.

2. THE PRESENT INVENTION

As the following chapter includes a substantial amount of text, it has herein been divided into separate sections, each one of which disclose separate aspects of the present invention.

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2.1 Summary of the invention

The object of the present invention is to fulfill the above defined need. This has been achieved by the crystallization and determination of the three-dimensional structure of LTA4 hydrolase complexed with the competitive inhibitor bestatin and subsequent structure determination of complexes between LTA_4 hydrolase and two specific inhibitors. It is the first three-dimensional structure of any protein component of the leukotriene cascade and enables a description of the structural basis and molecular mechanisms of various enzyme functions, such as the two catalytic activities of LTA4 hydrolase. In addition, the structural information will now make possible rational design of enzyme inhibitors, which may be developed into clinically useful anti-inflammatory drugs.

2.2 Brief description of the drawings

Figure 1 shows the key enzymes and intermediates in leukotriene biosynthesis.

Figure 2 shows 2Fo-Fc density contoured at 1.1 s. Part of the active site in the neighborhood of the bestatin molecules is shown.

Figure 3 is a ribbon diagram of the tertiary structure of leukotriene A4 hydrolase.

Figure 4 (a) is a ribbon diagram of the N-terminal domain.

Figure 5 (a) is a ribbon diagram of the catalytic domain.

Figure 6 shows the structure of the C-terminal domain.

Figure 7 illustrates zinc binding ligands in LTA4 hydrolase.

Figure 8 (a) is a Ball-and-Stick presentation of the binding of bestatin in LTA4 hydrolase.

Figure 8 (b) is a schematic overview of bestatin binding in LTA4 hydrolase.

Figure 9 (a) is a wire representation of the central cavity found in LTA4 hydrolase (shown as Cα-trace).

Figure 9 (b) is a schematic presentation for the proposed binding of LTA4 into the cavity.

Figure 10 is a schematic representation for the proposed reaction mechanism of the epoxide hydrolase.

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2.3 Definitions

In the present context, the term "the three-dimensional form adopted thereof in nature" is to be understood as the conformational structure, defined by the parameters x, y and z in a conventional coordinate system, that a naturally occurring molecule adapt under conditions where it is capable of exerting its biological activities. The specific conditions during which the herein presented data were collected are detailed in the section "Experimental".

The term "isolated" and variations thereof when used in connection with a molecule, such as protein, a polypeptide or a nucleic acid, means that said molecule is isolated from other substances, such as other proteins, DNA etc normally accompanying it in its natural environment.

The term "leukotriene A_4 (LTA_4) hydrolase" as used herein is to be understood to include any mammalian or other LTA_4 hydrolase which comprises the same backbone as the human form specifically disclosed in the present application, irrespective of source. The amino acid sequences of mammalian LTA_4 hydrolase

have been shown to be identical to about 90%. Thus, the three-dimensional structures thereof may be suspected to be identical to approximately the same extent. "Thiolamine" and "hydroxamic acid" are used herein to denote the compounds examplified in the Experimental section of the present specification.

A "complementary compound" means any compound, the structure of which enables a binding thereof to a specified protein, i.e a compound having a conformation or structure enabling such a suitable fit as to provide an energetically favorable interaction between protein-complementary compound.

"Analogue" means, as used herein, a chemically altered molecule which shares the backbone with, or at least structurally resembles, a "parent molecule". In the present specification, such a "parent molecule" may be LTA_4 hydrolase or an inhibitor thereof.

In the present application, the term "active site" is to be understood to include any region capable of binding a substrate and converting it into product.

The term "nucleic acid" refers to a deoxyribonucleotide or ribonucleotide polymer in either single- or double-stranded form, and unless otherwise limited, encompasses known analogs of nucleotides, that can function in a similar manner as naturally occurring nucleotides.

The phrase "hybridising specifically to" refers to the binding, duplexing, or hybridising of a molecule only to a particular nucleotide sequence under stringent conditions when that sequence is present in a complex mixture (*e.g.*, total cellular) of DNA or RNA. The term "stringent conditions" refers to conditions under which a probe will hybridise to its target subsequence, but to no other sequences. Stringent conditions are sequence-dependent and will be different in different circumstances. Longer sequences hybridise specifically at higher temperatures. Generally, stringent conditions are selected to be about 5°C lower than the thermal melting point Tm for the specific sequence at a defined ionic strength and pH. The Tm is the temperature (under defined ionic strength, pH, and nucleic acid concentration) at which 50% of the probes complementary to the target sequence hybridise to the target sequence at equilibrium. (As the target sequences are generally present in excess, at Tm, 50% of the probes are occupies at equilibrium). Typically, stringent conditions will be those

in which the salt concentration is less than about 1.0 M Na ion, typically about 0.01 to 1.0 M Na ion concentration (or other salts) at pH 7.0 to 8.3 and the temperature is at least about 30°C for short probes (*e.g.*, 10 to 50 nucleotides) and at least about 60°C for long probes (*e.g.*, greater than 50 nucleotides). Stringent conditions may also be achieved with the addition of destabilizing agents such as formamide. "Essentially pure" means herein a purity of at least about 80%, especially at least about 90% and preferably at least about 95%, such as 98-99%. The purity of LTA_4 hydrolase, an analogue or inhibitor thereof is according to the present invention preferably determined by general biochemical and biophysical methods well-known to the skilled in this field. For proteins, SDS polyacrylamide gel electrophoresis (SDS-PAGE) with Coomassie and silver staining or amino acid sequence analysis can be used, whereas high-pressure liquid chromatography (HPLC), gas chromatography coupled to mass spectrometry (GC-MS), and nuclear magnetic resonance spectroscopy (NMR) are suitable methods for small organic molecules (peptides, lipids, or carbohydrates, or combinations of these classes of substances).

2.4 Detailed description of the invention

2.4.1 LTA_4 hydrolase, subsequences and analogues thereof

In a first aspect, the present invention relates to an isolated protein comprising at least a subsequence of the amino acid sequence of leukotriene A_4 (LTA_4) hydrolase, which subsequence has the corresponding three-dimensional form adopted thereof in nature. The protein according to invention as discussed below and elsewhere in this application is also understood to encompass any other functionally equivalent part, derivative or conformational analogue thereof. More specifically, the invention relates to the above disclosed protein which comprises a subsequence of the amino acid sequence of leukotriene A_4 (LTA_4) hydrolase, which is able to participate in, and influence, e.g. by providing enzymatic activity, the leukotriene cascade. Most preferably, the protein according to the invention is capable of controling said cascade by exerting an enzymatic activity and thus regulate the production of leukotriene B_4 (LTB_4). In a particular embodiment, the protein is comprised of essentially all of the amino acid sequence of leukotriene A_4 (LTA_4) hydrolase as

disclosed in SEQ ID NO 1, or a functionally equivalent part, derivative or conformational analogue thereof.

Thus, the present invention relates to an isolated LTA_4 hydrolase in its naturally ocurring three-dimensional form. More specifically, the present application provides a listing illustrating, for the first time, the coordinates defining human LTA_4 hydrolase complexed to an inhibitor thereof. Thus, the coordinates defining the conformation of LTA_4 hydrolase have been determined by the present inventors as complexed with bestatin, thiolamine and hydroxamic acid, respectively. Bestatin is a universal inhibitor of amino peptidase activity, while the last mentioned two are specific inhibitors of LTA_4 hydrolase. Based on these different activities, said inhibitors may be used as models in the design of novel molecules having desired properties. Methods for such design will be discussed in further detail below as a further advantageous aspect of the invention. For reasons of conveniance for the reader of the present specification, the data collection comprising the novel coordinates according to the invention is included in the present description as a separate section denoted "X-ray data", as Tables 9-11, immediately preceding the claims. In said tables, atom no 1 to atom no 4876 define the LTA_4 hydrolase part of the complex. In table 9, atom no 4882 to atom no 5463 relate to bestatin. (Bestatin has been thorougly discussed in the litterature, see e.g. Mathé, G. *Biochem. Pharmacol.* **45**, 49-54 (1991).) The intervening atoms relate to the metals that bind in LTA_4 hydrolase, i.e. the active site Zn atom and the Yb atoms that were crucial for the present structure determination. The conditions prevailing at the determination thereof will be described in detail in the Experimental section below. As the skilled in this field realises, such coordinates usually exhibit a certain degree of variation, due to e.g. thermal motion and slight differences in crystal packing. Thus, any references herein to Tables 9-11 in connection with the proteins and other molecules are merely intended to illustrate the coordinates defining the conformation of the molecules under identical conditions, as determined by use of the same apparatus and method. Accordingly, this embodiment of the invention is not limited to a molecule having exactly the specified coordinates, but rather to

molecules capable of adopting such a structure. For example, a human LTA_4 hydrolase according to the invention will exhibit a strong bit a conformational similarity with the coordinates presented by atom nos 1 - 4876 of Tables 9-11, wherein a variation of about 1%, or 0.5 Å, may be expected. Accordingly, any such variants are within the scope of the present invention.

As regards amino acid sequence, in a specific embodiment, the protein according to the invention is identical, by direct sequence comparison, to at least about 50%, more specifically, at least about 70%, such as at least about 90%, to the LTA_4 hydrolase as defined by SEQ ID NO. 1 while in the three-dimensional form adopted thereof in nature. In this context, it is noted that the amino acid sequence of LTA_4 hydrolase also appears from the data of Tables 9-11, but is also included as a separate sequence listing for reasons of clarity. The protein of this embodiment of the invention are e.g. variants originating from any species, preferably mammals, such as humans, mice or other rodents, etc. Alternatively, the variants including subsequences of the human sequence are mutated forms, resulting from either spontaneous mutations or deliberately produced mutations, as discussed in more detail below.

One preferred embodiment of the present invention is a protein which comprises at least one of the regions defined below in Tables 1-3 below as active sites.

Table 1: Residues lining the big cavity from outsite to insite

	Left wall	**Right wall**
1		Lys608, Asp606, Lys605, Lys354, Thr355
2	Phe356, Phe362	Gln544, Asp573, Lys572, Arg568
3	Val376	Lys565, Arg540, Leu507

4	Ser380, Ser352, Glu348	Pro569
5	Tyr378, Glu348	Arg563, Glu533, Phe536, Arg537, Tyr267
6	Tyr383, Phe314, Glu318, Glu384, Arg326	
7	Gly268, Gly269, Met270	His295, Asn341, Phe340
8	Ser288, His497	Glu325, Asn291

In Table 1, Lys565, Ser380, Pro569, Glu533, Tyr383, Phe314, Glu318, Glu384, Arg326, Gly268, Gly269, Met270, His295, Phe340, Ser288, and Glu325 are strictly conserved amino acids, while Lys608, Phe356, Phe362, Lys572, Arg568, Tyr378, Phe536, Tyr 267, and Asn291 are conserved in nature.

Table 2: Amino-acids in the bestatin binding site ("basic" amino-peptidase site)

The binding of bestatin to LTA_4 hydrolase is described by way of coordinates in Table 9. Below follows the specific amino acids involved in the binding of bestatin and similar structures.

Gln136
Ala137
Tyr267
Gly268
Gly269
Met270
Glu271
Val292
His295
Glu296
His299
Glu318

Tyr378

Tyr383

Arg563

Lys565

Table 3: Amino acids in the leukotriene binding site

The present amino acids define the site binding leukotriene-based inhibitors, such as thiolamine and hydroxamic acid, as shown in Tables 10 and 11, respectively.

Gln136

Ala137

Tyr267

Gly268

Gly269

Met270

Glu271

Val292

His295

Glu296

His299

Trp315

Glu318

Val322

Phe362

Val367

Leu369

Pro374

Asp375

Ile372

Ala377

Pro382

Tyr378

Tyr383

Arg563

Lys565

In Tables 1-3 above, the enumeration of the amino acid sequence of LTA_4 hydrolase begin without the initial Met. Thus, compared to SEQ ID NO 1, which includes the initial Met, the amino acid enumeration above is lowered by one. Accordingly, Gln136 above corresponds to Gln 137 of SED ID NO 1, Ala137 above corresponds to Ala 138 of SEQ ID NO 1, etc.

Table 4: General catalytic domain for the M1 class of enzymes

Amino acids no. 210-450.

The present region will provide a basis for the development of enzyme inhibitors useful in the control other biological pathways than the leukotriene cascade.

Thus, as regards the above defined region of aminopeptidase activity of LTA_4 hydrolase, the present inventors have surprisingly observed, that said region is in fact universal for all enzymes belonging to the metallohydrolase family denoted M1. Thus, this specific subsequence of LTA_4 hydrolase is encompassed by the present invention as a novel protein *per se*. In addition to the various advantageous uses of subsequences of LTA_4 hydrolase described herein in connection with the leukotriene cascade, this region, which is shared between all M1 enzymes, will find several further applications in connection with other enzymatic pathways. For example, the present region, herein denoted the "M1 region" in order to clarify that it is shared between the M1 enzymes, may advantageously be used to produce synthetic inhibitors, or identify natural inhibitors, of any one of the other M1 enzymes. Such M1 inhibitors will be discussed below when compounds complementary to LTA_4 hydrolase are disclosed.

The above disclosed proteins and peptides comprising subunits of LTA_4 hydrolase are advantageously used e.g. as enzymes or more preferably in methods wherein novel inhibitors of enzymatic activities are identified and/or designed.

2.4.2 Compounds complementary to LTA_4 hydrolase

In a second aspect, the present invention relates to a novel compound defined by a structure substantially complementary to the above described protein, preferably identified by use of the novel LTA_4 hydrolase conformation according to the present invention. The complementary compound is a naturally occurring or synthetic protein, peptide, lipid, carbohydrate or any other organic or inorganic compound. In relation to naturally occurring compounds, it is to be understood that the present invention relates to such compounds as isolated from their natural environment, preferably identifiable by aid of the novel coordinates defining structures according to the invention, as examplified by the complementary compounds used in the complexes shown in Tables 9-11.

In a first embodiment, the present complementary compound is substantially complementary to an enzymatically active site of the protein and is advantageously capable of specifically inhibiting an enzymatic activity of said protein. Thus, in one embodiment, the present compound is substantially complementary to parts, or all, of the "basic" aminopeptidase binding site defined in Table 2 above. Thus, the present compound is an inhibitor capable of specifically inhibiting an aminopeptidase activity of an enzyme, preferably of LTA_4 hydrolase. In an alternative embodiment, the present compound is substantially complementary to parts, or all, of the leukotriene binding site as defined in Table 3 above. Thus, the present compound is an inhibitor capable of specifically inhibiting an epoxide hydrolase activity of an enzyme, preferably of LTA_4 hydrolase. (The inhibition of both aminopeptidase and epoxidase hydrolase is discussed in detail below in the experimental section.) As the present two binding sites of LTA_4 hydrolase overlap in part, a further embodiment is a compound which is complementary to essential parts

of both of the above discussed two binding sites, in part or partially, which thus preferably is an inhibitor of both the discussed activities.

As already mentioned above, one compound which is complementary to an enzymatically active site of LTA_4 hydrolase is a compound complementary to the M1 region thereof and thus capable of partial or total inhibition of the enzymatic activity of LTA_4 hydrolase or any other metallohydrolase belonging to the M1 family. In the present application, such inhibitors will be denoted M1 inhibitors.

As the skilled in this field will realise, the present inhibitors disclosed above need not be compound that inhibit a biological activity completely, but may be capable of exerting a partially inhibiting activity, i.e, lowering the enzymatic activity.

In another embodiment, the present complementary compound is a compound which is also capable of binding to the receptor for the product of an LTA_4 hydrolase, i.e. an LTB_4 receptor, e.g. on a cell, such as a polymorphonuclear leukocyte. Thus, such a compound may be useful as an LTB_4 antagonist whereby the biological effect of LTA_4 hydrolase activity may be regulated. Accordingly, any such LTB_4 antagonist designed and/or identified using the coordinates of LTA_4 hydrolase as presented herein are also encompassed by the present invention.

In another embodiment, the present complementary compound is a compound which, apart from being capable of binding to an active site of LTA4 hydrolase, is also capable of binding to an active site of LTC4 synthase which binds the same substrate as LTA4 hydrolase, i.e. LTA4, and turns it over into LTC4 (*cf.* Fig 1) and is thus expected to share important structural features with the active site of LTA4 hydrolase. Such a compound may be useful as an inhibitor of LTC4 biosynthesis, whereby the production thereof may be regulated. Accordingly, any such LTC4 synthase inhibitor, designed and/or identified using the coordinates of LTA4 hydrolase, are also encompassed by the present invention.

The specific properties and advantageous uses of the present compounds as well as the design and production of novel LTA_4 hydrolase inhibitors will be described in further detail below in relation to the various methods.

2.4.3 A complex of LTA_4 hydrolase and a complementary compound

In a third aspect, the present invention relates to an isolated complex comprised of a protein as described above and a compound complementary to said protein. Said complementary compound may thus be an inhibitor of one or more of the protein's enzymatic activities, such as an aminopeptidase and/or epoxide hydrolase activity, such as bestatin, hydroxamic acid or thiolamine, or leukotriene B_4 or any analogue thereof, or LTC_4 or any analogue thereof. Examples of complementary compounds are bestatin, thiolamine or hydroxamic acid. In the present context, it is to be understood that the invention also relates to specific regions of said inhibitors, that have never been specifically disclosed for the present purpose, as well as novel inhibitors identified by aid of the present invention. In specific embodiments, the complex according to the invention is composed of LTA_4 hydrolase complexed with bestatin, thiolamine or hydroxamic acid, respectively, as defined by the coordinates presented in Tables 9-11, or any functional fragment, derivative or analogue thereof. As bestatin is aminopeptidase based, further similar and advantageous inhibitors may be developped based on the structural information provided in Table 9, preferably combined with the specification of the binding site of Table 2. Further, as both thiolamine and hydroxamic acid are leukotriene based, the information provided in Tables 10 and 11, preferably combined with the specification of binding site of Table 3, will prove to be an advantageous tool in order to gain more information about such enzymatic binding and thus the development of further novel inhibitors.

Accordingly, the present invention presents for the first time the coordinates defining the three-dimensional structure of a complex of LTA_4 hydrolase and an inhibitor thereof as determined by X-ray crystallography and illustrated in Tables 9-

11. In fact, this is the first time ever to disclose any three-dimensional structure of a protein component of the leukotriene cascade. Due to these novel reliable parameters, the complex as well as the components thereof are readily distinguished from the prior art. Together with biochemical and mutagenetic data, the novel structures will provide the basis for understanding the molecular mechanisms of the aminopeptidase and epoxide hydrolase activities, as well as the enzyme's suicide inhibition. Accordingly, the present invention will open a whole range of new possibilities as regards e.g. identification and/or design of novel biologically active molecules and methods of controlling said cascade, *in vivo* or *in vitro*. Consequently, novel advantageous drugs, such as medicaments for the treatment and/or prevention of inflammatory and/or allergic diseases, may be designed, as will be discussed in further detail below.

In the present context, it is to be understood that proteins according to the invention include the naturally ocurring three dimensional forms thereof, separated and isolated from its natural environments, as well as any such protein, wherein deletions, additions and/or substitutions of the amino acid sequence have been made, provided that the three dimensional structure is substantially maintained, as the exerted biological activity is critically dependent upon the particular three-dimensional folding of the protein. The present invention also encompasses any derivative or conformational analogue of the above disclosed proteins, which has a three-dimensional structure essentially as disclosed above, or an effective part thereof having the biological activities discussed in detail below.

2.4.4 Advantageous uses of LTA_4 hydrolase, complementary compounds and complexes thereof

A fourth aspect of the present invention is the use of a protein, a complementary compound or a complex according to to the invention in drug design, such as in molecular modeling, direct structure-based design and/or combinatorial chemistry. Such methods will be disclosed in detail below. The drugs designed using the above

mentioned compounds may be suitable for the treatment and/or prevention of disorders involving acute and chronic inflammatory symtoms, said disorder being selected from the group consisting of arthritis, inflammatory bowel disease (IBD), psoriasis, chronic obstructive pulmonary disease (COPD), and acquired immune deficiency syndrome (AIDS). Further, such a drug may be useed for the treatment and/or prevention of proliferative disorders, such as neoplasias and/or cancer. Alternatively, a drug may be designed which is effective for the treatment and/or prevention of an inflammatory and/or allergic disorders caused by the lethal factor of *Bacillus anthracis,* e.g. anthrax. However, the above mentioned diseases are exemplary and other diseases or conditions not mentioned herein may also be contemplated.

In a further aspect, the present invention relates to the use of a protein having a structure substantially as defined for the LTA_4 hydrolase of the invention, or a part, analogue or derivative thereof, for screening a compound for possible medicinal activity. In the pharmaceutical industry, new or known compounds are routinely screened for new uses employing a variety of known *in vitro* or *in vivo* screens. Often such screens involve complex natural substances and are consequently expensive to carry out, and the results may be difficult to interpret. However, the knowledge of the three-dimensional protein structure according to the invention allows a preliminary screening to be carried out on the basis of the three-dimensional structure of a region thereof, and the structural similarity of a molecule which is being screened. Such screening can conveniently be carried out using computer modelling techniques, which match the three-dimensional structure of the protein or part thereof with the structure of the molecule being screened. Potential agonist or inhibitor activity may be predicted. As a result, the production efficiency, bioavailability, immunogenicity, stability etc. may be favourably changed with respect to their therapeutic application.

As regards the above disclosed M1 inhibitors, these compounds will presumably find a broader field of application than the other novel inhibitors according to the

invention. Thus, the novel general M1 inhibitors are advantageously used e.g. in models to disclose in further detail other enzymatic pathways. Further, they may also be used in the above mentioned type of methods of drug design etc.

2.4.5 Screening for LTA_4 hydrolase analogues

2.4.5 (a) Method

Accordingly, in another aspect, the invention relates to a method for screening LTA_4 hydrolase analogues that mimic at least a part of the three dimensional structure of LTA_4 hydrolase, which comprises the steps of

(a) producing a multiplicity of analogue structures of the LTA_4 hydrolase

(b) selecting an analogue structure represented by a three-dimensional representation wherein the three-dimensional configuration and spatial arrangement of specific regions, preferably involved in ligand binding of said LTA_4 hydrolase, remain substantially preserved.

The coordinates used are general for LTA_4 hydrolase are essentially as illustrated in Tables 9-11, as defined by atom nos 1-4876.

More specifically, analogue structures of LTA4 hydrolase may be screened by their ability to catalyze a particular reaction which may be monitored by chemical physical or immunological means. Furthermore, the analogue structure may be selected from its ability to produce receptor ligands or inhibitors of secondary reactions, which may be monitored directly, as examplified above, via binding assays, enzyme assays, chemical assays, or functional bioassays.

Thus, in one embodiment, the invention relates to a method of screening, wherein one or more analogues exhibiting epoxide hydrolase activity, are screened for. Thus, such a method may be primarily based on the data of Table 10 and 11, wherein the binding of thiolamine and hydroxamic acid to LTA_4 hydrolase is shown, preferably combined with the information of Table 3 regarding the active site of LTA_4

hydrolase. In one embodiment, the invention relates to a method of screening, wherein one or more analogues exhibiting epoxide hydrolase activity, are screened for. In an alternative embodiment, the present method is used to screen for analogues exhibiting aminopeptidase activity, which method is primarily based on the data of Table 9, wherein the binding of bestatin to LTA_4 hydrolase is shown, preferably combined with the information of Table 2 regarding the active site of LTA_4 hydrolase. Thus, the present analogues will comprise a region which is essentially analogue with the regions of LTA_4 hydrolase exhibiting aminopeptidase activity, and/or analogues exhibiting epoxide hydrolase activity are selected.

In an advantageous embodiment of the screening method according to the invention, one or more analogues comprising one or more genetic modifications, as compared to the naturally occuring form of LTA_4 hydrolase, are selected.

2.4.5 (b) Analogues obtainable by the present screening method

Further, the invention also relates to a novel analogue obtainable by the method according to the invention, such as an analogue exhibiting an increased or improved or otherwise modified catalytic activity when compared to the naturally occurring form of LTA_4 hydrolase. Preferably, said catalytic activity is an epoxide hydrolase and/or aminopeptidase activity. Further, the invention relates to an analogue obtainable by the present method and capable of acting as a metallohydrolase, preferably belonging to the M1 class of metallohydrolases.

2.4.5 (c) Mutated forms of LTA_4 hydrolase obtainable by the present screening method

In one advantageous embodiment, the present invention relates to a specified analogue which is a mutated form of LTA_4 hydrolase, which analogue comprises one or more of the mutations defined in the following Tables 5-7, wherein amino acids are given in single letter code. Thus,

Q134G/A/V/L/I/S/T/D/E/N/R/H/K/P/C/M/F/Y/W indicates that residue glutamine

134, using the LTA4 hydrolase numbering scheme, is modified to an alanine, valine, a leucine and so forth.

Table 5: Mutations in the active site

Q134G/A/V/L/I/S/T/D/E/N/R/H/K/P/C/M/F/Y/W	5(1)
Q136G/A/V/L/I/S/T/D/E/N/R/H/K/P/C/M/F/Y/W	5(2)
A137G/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(3)
Y267G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/W	5(4)
G268A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(5)
G269A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	56)
M270G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/F/Y/W	5(7)
E271G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W	5(8)
V292G/A/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(9)
H295/G/A/V/L/I/S/T/D/E/N/Q/R/K/P/C/M/F/Y/W	**5(10)**
E296/G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W	**5(11)**
H299G/A/V/L/I/S/T/D/E/N/Q/R/K/P/C/M/F/Y/W	**5(12)**
W311G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y	5(13)
F314G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/Y/W	5(14)
W315G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y	5(15)
E318G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W	**5(16)**
V322G/A/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(17)
F362G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/Y/W	5(18)
V367G/A/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(19)
L369G/A/V/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(20)
I372G/A/V/L/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(21)
P374G/A/V/L/I/S/T/D/E/N/Q/R/H/K/C/M/F/Y/W	5(22)
D375G/A/V/L/I/S/T/E/N/Q/R/H/K/P/C/M/F/Y/W	5(23)
A377G/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/Y/W	5(24)
Y378G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/W	**5(25)**
P382G/A/V/L/I/S/T/D/E/N/Q/R/H/K/C/M/F/Y/W	5(26)

Y383G/A/V/L/I/S/T/D/E/N/Q/R/H/K/P/C/M/F/W	**5(27)**
R563G/A/V/L/I/S/T/D/E/N/Q/H/K/P/C/M/F/Y/W	5(28)

More specifically, this embodiment relates to an analogue comprising any combination of at least two mutated amino acids, or any one of the above mentioned sequences of mutations, or any separate one amino acid mutation selected from the group consisting of sequences nos 1-9, 13-15, 17-24, 26 and 28, which are all novel mutations that have never been published before the present application. However, the other sequences not specified above are novel in the present context and thus such specific uses thereof are within the scope of the present invention.

Table 6: Mutations of the curved outside of the N-terminal domain

R17 G/A/V/L/I/S/T/D/N/E/Q/H/K/P/C/M/F/Y/W	6(1)
K19 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W	6(2)
H20 G/A/V/L/I/S/T/D/N/E/Q/R/K/P/C/M/F/Y/W	6(3)
H22 G/A/V/L/I/S/T/D/N/E/Q/R/K/P/C/M/F/Y/W	6(4)
R24 G/A/V/L/I/S/T/D/N/E/Q/H/K/P/C/M/F/Y/W	6(5)
D28 G/A/V/L/I/S/T/N/E/Q/R/H/K/P/C/M/F/Y/W	6(6)
T33 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(7)
T35 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(8)
G36/A/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(9)
T37 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(10)
A39 G/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(11)
T41 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(12)
Q43 G/A/V/L/I/S/T/D/N/E/R/H/K/P/C/M/F/Y/W	6(13)
K63 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W	6(14)
V65 G/A/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W	6(15)
N67 G/A/V/L/I/S/T/D/E/Q/R/H/K/P/C/M/F/Y/W	6(16)
N97 G/A/V/L/I/S/T/D/E/Q/R/H/K/P/C/M/F/Y/W	6(17)
E99 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W	6(18)

V101 G/A/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(19)

E103 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W 6(20)

S105 G/A/V/L/I/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(21)

E107 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W 6(22)

K153 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W 6(23)

T155 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(24)

T157 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(25)

E159 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W 6(26)

S161 G/A/V/L/I/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(27)

D175 G/A/V/L/I/S/T/N/E/Q/R/H/K/P/C/M/F/Y/W 6(28)

E177 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W 6(29)

T178 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(30)

D180 G/A/V/L/I/S/T/N/E/Q/R/H/K/P/C/M/F/Y/W 6(31)

R186 G/A/V/L/I/S/T/D/N/E/Q/H/K/P/C/M/F/Y/W 6(32)

I188 G/A/V/L/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(33)

K190 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W 6(34)

I192 G/A/V/L/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 6(35)

K194 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W 6(36)

Table 7: Mutations at the proline rich region

T359 G/A/V/L/I/S/D/N/E/Q/R/H/K/P/C/M/F/Y/W 7(1)

E358 G/A/V/L/I/S/T/D/N/Q/R/H/K/P/C/M/F/Y/W 7(2)

D443 G/A/V/L/I/S/T/N/E/Q/R/H/K/P/C/M/F/Y/W 7(3)

A446 G/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 7(4)

Y449 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/W 7(5)

S450 G/A/V/L/I/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 7(6)

P451 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/C/M/F/Y/W 7(7)

G452 /A/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 7(8)

L453 G/A/V/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W 7(9)

P454 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/C/M/F/Y/W	7(10)
P455 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/C/M/F/Y/W	7(11)
I456 G/A/V/L/S/T/D/N/E/Q/R/H/K/P/C/M/F/Y/W	7(12)
K457 G/A/V/L/I/S/T/D/N/E/Q/R/H/P/C/M/F/Y/W	7(13)
P458 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/C/M/F/Y/W	7(14)
N459 G/A/V/L/I/S/T/D/E/Q/R/H/K/P/C/M/F/Y/W	7(15)
Y460 G/A/V/L/I/S/T/D/N/E/Q/R/H/K/P/C/M/F/W	7(16)
D461 G/A/V/L/I/S/T/N/E/Q/R/H/K/P/C/M/F/Y/W	7(17)

2.4.5 (d) Nucleic acids encoding the novel compounds

Further, the invention also relates to an isolated nucleic acid encoding a novel analogue as defined above, that is, including a combination of any at least two of said mutations or one of the novel mutations, as well as a nucleic acid capable of specifically hybridising to a such a nucleic acid. The conditions of specific hybridisation are defined above in the section "Definitions". Further, the invention also relates to any vector or carrier comprising such a nucleotide, such as plasmids, viral vectors, e.g. retrovirus, oligonucleotides etc. Thus, any cell including such a nucleic acid or vector are also within the scope of the present invention and may e.g. be a mammalian cell, such as a human cell, or any other eucaryotic cell, or a procaryotic cell, such as a bacterium. The above mentioned elements may be used in the design of model systems useful in the study of the diseases discussed elsewhere in this application, which systems may be cell cultures, animal models, such as mice, etc.

2.4.6 (a) Production and purification of genetically modified forms of LTA_4 hydrolase

Yet another aspect of the present invention is a process for the production of a novel genetically modified form of LTA_4 hydrolase identified or designed according to the present invention. Thus, the present process involves, after conventional steps of insertion a gene encoding the desired product in a host cell and expression thereof, a purification procedure, which includes a hydroxyapatite-based chromatography and

a subsequent anion exchange chromatography. These last two steps have been shown to be especially advantageous, in fact, even crucial, for obtaining a satisfying purity of the novel LTA_4 hydrolase forms according to the invention. The preceding steps are conventional as disclosed in literature and are easily performed by the skilled in this field.

Thus, in more detail, the invention relates to a method for purification of LTA4 hydrolase comprised of (i) precipitation with ammonium sulphate, followed by (ii) separations on FPLC using anion exchange, hydrophobic interaction, and chromatofocusing resins, essentially as described (Wetterholm A., Medina J.F., Rådmark O., Shapiro R., Haeggström J.Z., Vallee B.L., Samuelsson B. *Biochim. Biophys. Acta.* **1080**, 96-102 (1991)). To achieve a purity suitable for crystallography, we used (iii) chromatography on hydroxyapatite, e.g., on a TSKgel HA-1000, Tosohaas, followed by (iv) a step of anion-exchange chromatography on e.g., Mono-Q HR5/5.

Further, example 4 below describes in detail a purification of LTA_4 hydrolase according to the invention. Said example may be generalised to describe further the purification according to the invention.

2.4.6 (b) Purified LTA_4 hydrolase

Further, the invention also relates to an essentially pure form of LTA_4 hydrolase obtained by the process described above.

2.4.7 Screening for LTA_4 hydrolase binding compounds

2.4.7 (a) Method

In yet a further aspect, the present invention relates to a method for screening LTA_4 hydrolase binding compounds complementary to a region, preferably an enzymatically active site, e.g. as defined in Tables 1-3, of the LTA_4 hydrolase molecule, which comprises the steps of

(a) producing a multiplicity of possible complementary structures and

(b) selecting a structure represented by a three-dimensional representation, wherein the three-dimensional configuration and spatial arrangement of regions of LTA_4 hydrolase involved in binding remain substantially preserved, which selection is based on the three-dimensional structure of LTA_4 hydrolase and/or LTA_4 hydrolase complexed to an inhibitor thereof, as defined by the coordinates of Table 9, 10 or 11.

More specifically, the method according to the invention will advantageously be used to select compounds capable of inhibiting epoxide hydrolase activity and/or aminopeptidase activity, LTB_4 receptor antagonists or inhibitors of LTC_4 synthases or inhibitors of any member of the M1 class of metallohydrolases. In one preferred embodiment, general enzyme inhibitors are screened for, which inhibitors are useful in the control of any one of a plurality of enzymatic pathways, wherein a metallohydrolase of the M1 type is participating. These general metallohydrolase inhibitors are herein denoted M1 inhibitors.

Structure-based design of inhibitors

In a further embodiment, the present invention relates to a method of structure-based design of LTA_4 hydrolase inhibitors. Such methods are based on the use of the present coordinates, or preferably the coordinates defining a selected region, as templates in order to synthesize advantageous inhibitors with strong and specific binding properties. More specifically, said method first uses a conventional organic synthesis, alone or combined with combinatorial chemistry, wherein the structure of the product of the synthesis is then further refined by cycles of crystallisation of enzyme and inhibitor, followed by another chemical synthesis, the product of which is again refined, etc.

Example 2 describes such a design, wherein it is noted noted that the removal of an extra carbon atom could yield a compound, which is a better inhibitor than this hydroxamic acid compound. Thus, similar conclusions will be drawn from the present method and result in inhibitors with superior properties compared to any prior art inhibitors.

2.4.7 (b) Identified binding compounds

Further, the present invention also relates to any novel compounds identifiable by the present method. Advantageous and desired properties as well as other features of such compounds, e.g. as inhibitors, is discussed above in relation to complementary compounds, analogues etc. In one preferred embodiment of the invention, such an identified compound is an inhibitor of another M1 enzyme than LTA_4 hydrolase, such as . The medicinal aspects of the present compounds will be discussed below.

2.4.8 Protein engineering

2.4.8 (a) Method

In a further aspect, the present invention relates to a method of engineering a protein, which method comprises the steps of

-identification of a suitable set of mutation sites based on the structure of LTA_4 hydrolase according to the invention,

-generation of a library of genes which contains the suitable sequence variations;

-selection of clones encoding a LTA_4 analogue with a desired activity;

wherein said desired activity is the capability of efficiently producing organic compounds of interest.

The present method is based on recent techniques available for generating large libraries of mutated genes (>1 billion variants) which can be attributed to a selection process of individual genes in the laboratory. Such directed evolution schemes have enormous potential for the design of new proteins, including new substrate specificity for enzymes as well as improving enzyme activities.

Directed evolution, or combinatorial engineering schemes have been successfully applied in evolving RNA molecules with improved binding and catalytic activities (Lorsch and Szostak, 1994). Also binding proteins (and peptides) with good affinities can now routinely be evolved based on a range of different protein folds (Nord et al, 1997). The present methods may be used to perform such a directed

evolution of advantageous enzyme activity and specificity and may be performed by someone skilled in this field with reference to the literature, see e.g. O. Kuchner and F. H. Arnold (1997); A. Crameri, S.A. Raillard, E. Bermudez and W.P.C. Stemmer (1998).) In this context, see also the descriptions provided in US patent no 5 873 082, Noguchi, wherein a list processing system for managing and processing lists of data is disclosed; US patent no 5 869 295, LaBean et al., disclosing methods and materials for producing gene libraries; and US patent no 5 856 928, disclosing a process for gene and protein representation, characterization and interpretation thereof.

In general, major difficulties in this kind of process are to search the sequence space: find the suitable sequence variations for a large but limited number of mutations (for the same protein fold an immense number of variations can be made e.g. 10 resides protein, 20^{100} variants are in theory possible). It is therefor very important to identify the residues in the protein structure which could effect the activity the most, i.e. the residues near the active site area. Thus, in order to enable a successful performance of a method for engineering proteins with properties relevant in the present field, the data discosed above, more specifically, in Tables 2-4, is crucial.

Further references which are relevent in the context of protein engineering are K. Nord, E. Gunneriusson, J. Ringdahl, S. Stahl, M. Uhlen, P.A. Nygren (1997): "Binding proteins selected from combinatorial libraries of an alpha-helical bacterial receptor domain", *Nature Biotechnology* ,**15**, 772-777 (1997); R. Lorsch and J.W. Szostak (1994): "*In vitro* evolution of new ribozymes with polynucleotide kinase activity", *Nature*, **371**, 31-36; A. Crameri, S.A. Raillard, E. Bermudez and W.P.C. Stemmer (1998): "DNA shuffling of a family of genes from diverse species accelerates directed evolution", *Nature*, **391**, 288-291; and O. Kuchner and F. H. Arnold (1997): "Directed evolution of enzyme catalysts", *Trends in Biotechnology*, **15**, 523-530.

In an advantageous embodiment, the present method is used to engineer LTA_4 hydrolase inhibitors and/or analogues. In a specific embodiment of said method, a compound capable of mimicking the suicidal mode of LTA_4 hydrolase catalysis, thus acting as a mechanism-based suicide inhibitor, or otherwise capable of regulating the production of LTB_4 is engineered. In an alternative embodiment, an inhibitor of LTC_4 synthase or an LTB_4 receptor antagonist is designed.

2.4.8 (b) Novel specifically designed proteins

Further, the present invention also relates to any novel protein designed by use of the above described method. Once specified, such proteins may be produced by any conventional method well known to the skilled in this field, some of which are examplified below. In Example 2 below, the binding of hydroxamic acid to LTA4 hydrolase is discussed. Thus, such a modified hydroxamic is one example of a novel inhibitor specifically designed according to the invention, and the resoning in the example may be used as a basis for the way of reasoning that is used in the present design.

Accordingly, novel enzymes may be produced, which are capable of any different chemical activity. For example, enzymes capable of novel catalytic properties, enzymes that in turn produce enzymes, etc., may be produced according to the present invention.

2.4.8 (c) Use of genetically modified LTA_4 hydrolase

The invention also encompasses the use of a genetically modified LTA4 hydrolase, obtained by any method according to the invention, with altered catalytic properties, e.g., increased ability to synthesize LTB4. The modified enzyme may thus be used for production of LTB4, or any analogues substances, a biomedical reagent which in turn may be used in, e.g., studies of leukotriene metabolism, induction of chemotaxis, as a reference compound in analysis of leukotrienes etc.

2.4.9 Pharmaceutical applications of the present invention

2.4.9 (a) First medical indication

Further, the invention also encompasses a compound obtainable by the method of screening LTA_4 hydrolase binding compounds or the protein engineering methods described above, and more preferably, said compound for use as a medicament. One specifically advantageous embodiment is the herein disclosed novel M1 inhibitor for use as a medicament.

In an advantageous embodiment, the present compounds are used in the manufacture of a medicament for the treatment and/or prevention of acute and chronic inflammatory disorders, said disorder being selected from the group consisting of arthritis, inflammatory bowel disease (IBD), psoriasis and chronic obstructive pulmonary disease (COPD); neoplasias and/or cancer; or disorders caused by the lethal factor of *Bacillus anthracis,* e.g. anthrax. Alternatively, the use may relate to the manufacture of a medicament for the treatment and/or prevention of an inflammatory and/or allergenic disorder, such as bronchial asthma, allergic rhinitis, conjunctivitis etc. Yet an alternative use is in the manufacture of a medicament for the treatment and/or prevention of infection caused be human immunodeficiency virus (HIV). The novel M1 inhibitor are preferably used in medicaments for the treatment and/or prevention of such various diseases as cancer and/or endochrinological disturbances.

2.4.9 (b) Second medical indication and pharmaceutical methods

Thus, the present invention relates to the above mentioned molecules prepared by the method according to the invention for use in the manufacture of various medicaments for the above defined conditions. The invention also encompasses pharmaceutical preparations containing these molecules together with pharmaceutically acceptable carriers. Methods for the preparation of pharmaceutical preparations are e.g. found in Remington's Pharmaceutical Sciences, Mack Publishing Company, Philadelphia, PA, 17th ed. (1985). For a review of drug delivery, see Langer, Science 249:1527-1533 (1990). As those skilled in this field

easily realise, the form of such a pharmaceutical preparation, the mode of administration thereof as well as suitable dosages will depend on the specific disease to be treated, the nature of the active substance used, the patient's age, body weight etc.

2.4.9 c) Methods of treatment

The present invention also encompasses any method of treatment for the above defined purposes. Exact details regarding such methods are determined by the practitioner depending on the specific circumstances from case to case.

2.5 Production of novel molecules

The compounds, which may be proteins, polypeptides, peptides or any other organic molecules, prepared according to the methods according to the invention may be synthesized chemically by methods well known to those of skill in this field or they may be prepared by use of recombinant DNA technology by any suitable method well known to those of skill in this field. General methods of synthesis are e.g. found in Berger and Kimmel, Guide to Molecular Cloning Techniques, Methods in Enzymology, vol. 152, Academic Press, Inc., San Diego, CA; Sambrook et al., Molecular Cloning, A Laboratory Manual, 2nd Ed., vol. 1-3, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, 1989; and Current Protocols in Molecular Biology, F.M. Ausbel et al., Current Protocols (1994). Methods of reducing and denaturing proteins and inducing re-folding are well known to those of skill in the art, see e.g. Debinski et al., J. Biol. Chem., 268: 14065-14070 (1993); Kreitman and Pastan, Bioconjug. Chem., 4: 581-585 (1993); and Buchner et al., Anal. Biochem., 205: 263-270 (1992).

2. 6 Detailed description of the drawings

Figure 1 shows key enzymes and intermediates in leukotriene biosynthesis.

Figure 2 shows 2Fo-Fc density contoured at 1.1 σ. Part of the active site in the neighborhood of the bestatin molecules is shown. Figures are created using a modified version of Molscript48,49.

Figure 3 is a ribbon diagram of the tertiary structure of LTA4 hydrolase. The N-terminal domain at the top of the diagram is rich in β-strands and connects to the catalytic domain to the left in the figure which is more α-helical and extends into the central part of the molecule. The C-terminal domain, illustrated at the bottom of the ribbon diagram, extends towards the right side of the catalytic domain.

Figure 4 (a) is a ribbon diagram of the N-terminal domain with its layers of β-strands, while (b) is a superimposition of the Cα trace of the N-terminal domain on the Cα trace of bacteriochlorophyll *a*. The N-terminal domain covers approx. half of the bacteriochlorophyll *a* structure (the right and bottom part of the diagram).

Figure 5 (a) is a ribbon diagram of the catalytic domain. In the center of the diagram, the three zinc binding ligands, His295, His299, and Glu318, as well as the inhibitor bestatin are depicted in ball and stick representation. The zinc ion is shown as a CPK model. The diagram in (b) shows the structure of thermolysin in the same orientation as the catalytic domain of LTA4 hydrolase. The three zinc ligands, His142, His146, and Glu166, as well as the inhibitor Cbz-GlyP-(O)-Leu-Leu50 are depicted in ball-and stick representation. The zinc ion is shown as a CPK model.

Figure 6 shows the structure of the C-terminal domain.

Figure 7 shows the zinc binding ligands in LTA4 hydrolase, His295, His299, and Glu318, superimposed on those in thermolysin, His142, His146, and Glu-166. Other catalytic or neighboring residues in the two enzymes are Tyr383, Glu325, Glu296, Thr302, and Asn317 in LTA4 hydrolase which correspond to His231, Asp170, Glu143, Asn165, and Tyr157 in thermolysin.

Figure 8 (a) is a Ball-and-Stick presentation of the binding of bestatin in LTA4 hydrolase.

Figure 8 (b) is a schematic overview of bestatin binding in LTA4 hydrolase.

Figure 9 (a) is a wire representation of the cavity found in LTA4 hydrolase (shown as Cα-trace).

Figure 9 (b) is a schematic presentation for the proposed binding of LTA4 into the cavity.

Figure 10 is a schematic representation for the proposed epoxide hydrolase reaction mechanism. The catalytic zinc acts as a Lewis acid and activates the epoxide to form a carbocation intermediate according to an S_N1 reaction. Water is added at C12 in a stereospecific manner, presumably directed by Asp375. The double bond geometry is controlled by the binding conformation of LTA4. Further details are given elsewhere in the present description.

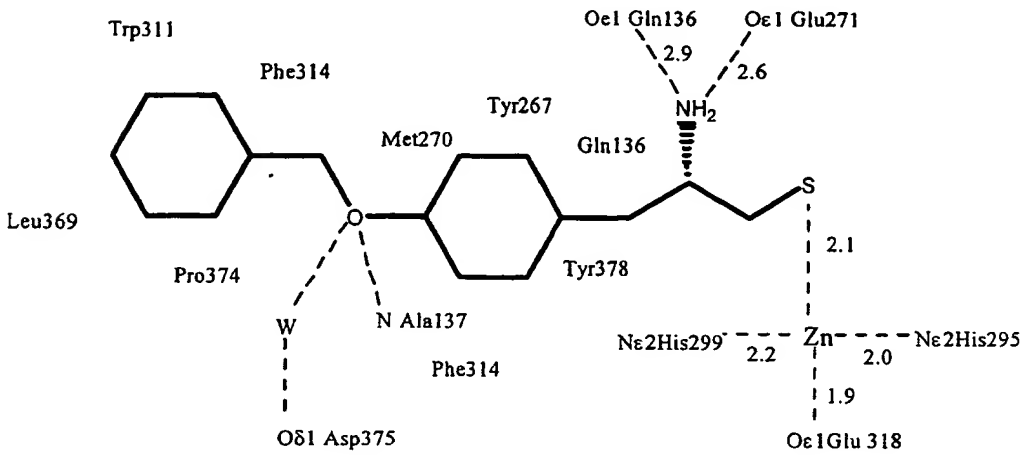
3. EXPERIMENTAL

The following examples are intended for illustrating purposes only and should not in any way be used to construe the scope of the protection of the present invention as defined by the appended claims. All the references given below, and previously in this specification, are hereby included herein by reference.

3.1 Examples

Example 1: Binding of the thiol-compound (I)

The thiol group of the compound is ligated to the Zn^{2+} ion, that has a tetra-hedral configuration. Both the phenyl-groups are making extensive hydrophobic interactions. The first one makes aromatic stacking interactions with Phe314 and Trp311. Further hydrophobic interactions are made with Pro374 and Leu369. The other phenyl ring is making stacking interactions with Tyr267 and Tyr378. Met270 and Gln136 provide additional hydrophobic interactions. The ether-oxygen in the linker between the two phenyl rings makes a hydrogen bond to the backbone nitrogen of Ala137 and also with a water molecule which is linked to Asp375. The amine group makes interactions to the Oε1 of Gln136 and the Oε1 of Glu271.

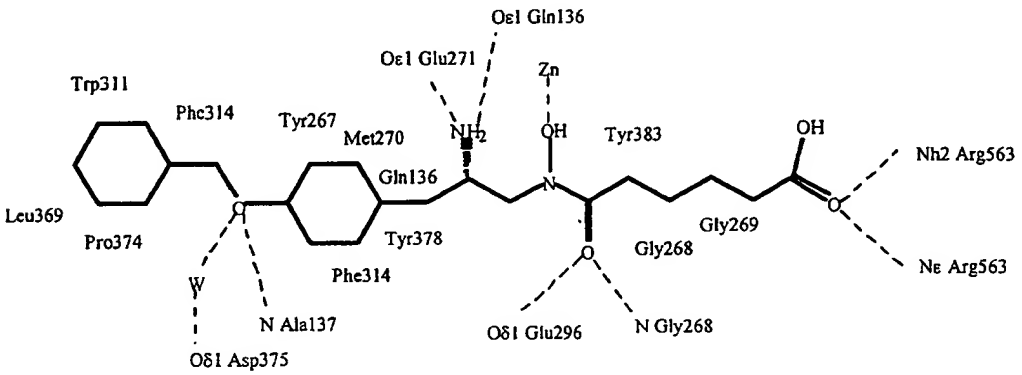


Formula (I)

Example 2: Binding of the hydroxamic acid compound (II)

The binding of this compound is very similar to the binding of the thiol compound described above. The manner in which the phenyl-moieties, the linker region and the amine group are bound is identical. The manner in which the hydroxamic acid part is bound is different in comparison with other complexes such as thermolysin-HA complexes and LTA_4-hydrolase-bestatin complex. Instead of a double interaction of the hydroxyl and carbonyl oxygens and the Zn ion resulting in a pentavalent co-ordination, here only one of the oxygens (the hydroxyl) is making an interaction with the Zn ion giving a tetrahedral co-ordination. The other oxygens make an interaction to Asp296 and the backbone nitrogen of Gly268. This difference is probably due to the tight binding of the phenyl rings and the amine group. The linkage between the amine group and the hydroxamic acid group contains one more carbon atom than in a normal or modified peptide-linkage. Since the binding site for substrates is rather narrow near the Zn ion, the conformation of compounds which bind in this area is rather restricted. Therefore one of the otherwise binding oxygens is pushed out and can no longer make an interaction with the Zn^{2+} ion. Removal of this extra carbon atom could yield a compound which is a better inhibitor than this

hydroxamic acid compound. The acid group at the other end of the compound is fixed by making a double interaction with the Nε and the Nh2 of Arg563.



Formula (II)

Example 3: Structure determination of two specific inhibitor-LTA_4 hydrolase complexes

Crystals, grown as described above, were soaked in 1 mM solution of thiolamine (Yuan et al., 1993) or 0.5 mM solution of hydroxamic acid (Hogg et al., 1995) in 15% PEG8000, 50 mM Imidazol pH 6.7, 25 mM acetate and 2.5 mM $YbCl_3$. After at least 24 hours, the crystals were transferred to a solution that contained a cryoprotectant (see above) and subsequently flash frozen in liquid nitrogen. The data for the crystal soaked with thiolamine was obtained at BM14B at the EMBL-outstation in DESY, Hamburg. The data for the hydroxamic acid was collected at beamline 7/11 at MAX-lab, Lund. Statistics from the data collections are shown in the table. The data were processed using MOSFLM, merging and other manipulations were performed by programs from CCP4 and the BIOMOL packages. The refinement procedures for both datasets were very similar. First rigid body refinement using TNT was performed. As a starting model for refinement and model building the structure of LTA4 hydrolase complexed with bestatin was used.

The bestatin molecule and all water molecules were deleted from the model. After this initial refinement it was possible to build the inhibitors into the protein. For evaluation of the density maps and model-building the program QUANTA (Molecular Simulations Inc., Burlington, MA) was used. The refinement was continued using TNT and was combined with sessions of model-building. In all rounds no sigma cut-offs were used and the resolution was slowly increased during the procedure. Water molecules were identified and incorporated into the models. During these procedures the R_{free} was carefully monitored. When refinement had converged, it was finished with one round in which all reflections, including those who were used for the calculations of the R_{free}, were incorporated. Statistics about refinement and quality of the models can be found in Table 5.

Table: Statistics of refinement and quality of the model

	Thiolamine (Thiol)	Hydroxamic acid (HA)
Resolution	15-2.5Å	15-1.8Å
Rfactor	17.8%	24.2%
Rfree	24.4	29.7%
Bond Lengths	0.011Å	0.012Å
Angles	1.9°	2.0°
Trigonal groups	0.005Å	0.006Å
Planar groups	0.009Å	0.010Å
Contacts	0.026Å	0.041Å
No. of waters	252	127

Example 4: Purification of LTA4 hydrolase.

For adsorption chromatography on hydroxyapatite, a TSKgel HA-1000 column (Tosohaas) was equilibrated in 10 mM potassium phosphate buffer, pH 7.1, supplemented with 0.2 mM $CaCl_2$. The enzyme sample was applied and a linear gradient of increasing phosphate (10 - 400 mM) was developed by mixing the starting buffer with 400 mM potassium phosphate buffer, pH 6.8, supplemented with 10 μM $CaCl_2$. Active fractions containing LTA4 hydrolase were eluted between 150 - 190 mM potassium phosphate.

Anion exchange chromatography was performed on a Mono-Q HR 5/5 column (Pharmacia Biotech) equilibrated with the loading buffer 10 mM Tris-Cl, pH 8. The pure protein was eluted using a linear gradient of KCl (0 - 500 mM) and was recovered at 110 - 140 mM KCl.

Example 5: Enzyme engineering

The present inventors have shown, that when Tyr-378 in LTA4 hydrolase was exchanged for a Phe residue, the resulting mutated enzyme was no longer suicide inhibited by LTA4 and exhibited a substantially increased catalytic efficiency. Furthermore, the mutated enzyme was capable of converting LTA4 not only into the natural product LTB4, but also into a novel metabolite, 6-*trans*-8-*cis*-LTB4. (Mueller, M.J., *et al. Proc Natl Acad Sci U S A* **93**, 5931-5935 (1996)).

Example 6: Enzyme-engineering

Tyr-383 in mouse LTA4 hydrolase was exchanged for Gln residue, which resulted in a mutated enzyme capable of forming the unnatural product 5S, 6S-dihydroxy-7,9-*trans*-11,14-*cis*-eicosatetraenoic acid from LTA4 (Andberg, M., Hamberg, M. & Haeggstrom, J.Z. *J. Biol. Chem.* **272**, 23057-23063 (1997)).

Example 7: Crystallisation of LTA_4 hydrolase

LTA_4 hydrolase was crystallised using $YbCl_3$ as an additive, 15% PEG and 50 mM Na-acetate as precipitant and 50 mM imidazole, pH 6.7, as buffer. Liquid-liquid-diffusion in capillaries were used as crystallisation set-ups.

3.2 Materials and Methods

Enzyme purification. Human recombinant LTA4 hydrolase was expressed in *E. coli* and purified to homogeneity in four chromatographic steps on FPLC using anion exchange, hydrophobic interaction, chromatofocusing, and hydroxyapatite resins, essentially as described (Wetterholm A., Medina J.F., Rådmark O., Shapiro R., Haeggström J.Z., Vallee B.L., Samuelsson B. Recombinant mouse leukotriene A4 hydrolase: a zinc metalloenzyme with dual enzymatic activities. *Biochim. Biophys. Acta.* **1080**, 96-102 (1991)).

Crystallization conditions. The chemicals used for the crystallization experiments were purchased from Merck and were of highest purity available. The sparse matrix kit was obtained from Hampton Research. Crystallization conditions for the protein were initially sought by using the sparse matrix approach (Jancarik, J. & Kim, S.-H. J. Appl. Crystallogr. **24**, 409-411 (1991)) in hanging drop vapor diffusion set-ups in cell culture plates at room temperature. Under condition 28, (30% PEG8000, 0.2 M sodium-acetate, 0.1 M cacodylate buffer, pH 6.5) needles grew. They were subsequently reproduced and optimized using a finer grid search, different temperatures for the equilibration and testing of additives. Crystals were only obtained when the inhibitor bestatin was present in the crystallization set-ups. Using $YbCl_3$ as an additive and switching to liquid-liquid diffusion in capillaries, allowed plate-like crystals to grow. Thus, 5 µl 28% PEG8000, 0.1 mM Na-acetate, 0.1 mM imidazole buffer, pH 6.8, 5 mM $YbCl_3$ is injected into the bottom of a melting point capillary and an equal volume of LTA4 hydrolase (5 mg/ml) in 10 mM Tris-Cl, pH 8, supplemented with 1 mM bestatin, is layered on top. Finally, the capillary is closed and stored at 22°C. Crystals with an average size of 0.6 x 0.4 x 0.05 mm^3 appear in 3 to 4 weeks.

Crystal properties. The plate-like crystals diffract beyond 2Å using synchrotron radiation. They belong to space-group P21212 with cell dimensions a = 67.59 Å, b = 133.51 Å, c = 83.40 Å, a = b = g = 90 ° at 100K. As a cryo-solution, a mixture of 15%PEG 8000, 50 mM Na-acetate, 50 mM imidazole buffer, pH 6.8, 2.5 mM $YbCl_3$, and 25% glycerol was used. Assuming one molecule per asymmetric unit the solvent content of the crystals is 48%.

Structure determination. The structure was determined by using multiple anomalous dispersion measurements on the LIII edge of Ytterbium (λ = 1.3862 Å) at beam line BM14 at the European Synchrotron Radiation Facility (ESRF), Grenoble. Three datasets, peak (PK), point of inflection (PI) and remote (RM), were collected to 2.5Å resolution from the same crystal. The crystal was aligned such that Bijvoet equivalent reflections could be collected in one pass of 90° for each wavelength. For RM a subsequent dataset to 2.15Å was collected. A second crystal was used for obtaining a dataset to 1.95Å. (For statistics on data-collection and quality, see table 1). Data were integrated using the program Denzo, scaled to each other using Scalepack (Otwinowski, Z. *Data collection and Processing. Proceedings of the ccp4 study weekend. SERC Daresbury Laboratory, Warrington, UK.* , 56-62 (1993)) and further analyzed using programs from the CCP4 package (Collaborative Computing Project Number 4. *Acta Crystallogr. Sect. D* **50**, 760-763 (1994)).

From Patterson functions one major and one minor Yb position could readily be identified, a third position was identified during heavy atom refinement in difference Fourier maps. The heavy atom parameters were refined using MLPHARE (Otwinowski, Z. *Isomorphous replacement anomalous scattering. Proceedings of the CCP4 study weekend. SERC Daresbury Laboratory, Warrington, UK.* , 80-85 (1991)) and SHARP (de La Fortelle, E. & Bricogne, G. *Met. Enzymol.* **276**, 472-494 (1997)). The final figures of merit was 0.57 to 2.15Å. Phase information was further improved to 2.15Å by solvent flattening using SOLOMON (Abrahams, J.P. & Leslie, A.G.W. *Acta Crystallographica* **D52**, 30-42 (1996)) with a solvent content of

43%. The quality of the maps was very good and the entire protein molecule (residue 1-610) could be traced unambiguously. All model building was performed using QUANTA (Molecular simulations). Refinement was started by a run of slow-cooling molecular dynamics in XPLOR (Brünger, A.T., Kuriyan, J. & Karplus, M. *Science* **235**, 458-460 (1987)) using the RM dataset to 2.7Å. The three Yb ions were included into the refinement with full occupancy for the first Yb and half occupancy for the two other ions. All subsequent refinement was performed with TNT (Tronrud, D.E., ten Eyk, L.F. & Matthews, B.W. *Acta Crystallogr. Sect. A* **43**, 481-501 (1987)). The same set of reflections (4% of total amount from 25-1.95Å) for the calculation of R_{free} (Brünger, A.T. *Nature* **355**, 472-475 (1992)) was maintained throughout all refinement procedures. The resolution was slowly improved by alternating sessions of model-building and refinement. The data for the second crystal to 1.95Å were used for further refinement during which a Zn ion, bestatin, an acetate and an imidazole molecule were identified. Judged from the B-factors these molecules are all fully occupied. 540 water molecules were added to the coordinates. The R_{free} was 24.7% and the working R-factor was 18.8% for all data between 25-1.95 Å. In a final round of refinement all data between 25-1.95 Å were included, yielding a final R-factor of 18.5 % for residues 1-610, 3 Yb ions, 1 Zn, 1 bestatin, 1 imidazole, 1 acetate and 540 water molecules. Most of the model is in good density (Fig. 2) except a loop encompassing residues 179 to 184 for which only poor density was obtained. The model has good stereo-chemical parameters (r.m.s bonds =0.010Å, r.m.s angles = 2.2°) and 91.7% of the residues lie in the most favored part of the Ramachandran plot.

4. RESULTS AND DISCUSSION

4.1 Overall structure and domain organization

The leukotriene A4 hydrolase molecule is folded into three domains; an N-terminal domain, a catalytic domain and a C-terminal domain which together form a flat triangular arrangement with approximate dimensions of 85 x 65 x 50 $Å^3$. The overall structure of the enzyme is depicted in figure 3. Although the three domains pack closely and make contact with each other, a deep cleft is formed in between.

4.2 The N-terminal domain is structurally related to bacteriochlorophyll *a*

The N-terminal domain (residue 1-209) is composed of one 7 stranded mixed b-sheet, one 4 and one 3 stranded antiparallel β-sheet. Strands from the larger β-sheet continue into the two smaller β-sheets that pack on the edges of the same side of the larger sheet so that a kind of envelope is formed (Fig. 4a & b). The two small β-sheets are turned towards the inside of the whole protein while the larger β-sheet is exposed to solvent and forms a large concave surface area. Loops connecting the other strands and hydrophobic residues fill the core of this domain. The N-terminal domain of LTA4 hydrolase shares important structural features with the chlorophyll-containing enzyme bacteriochlorophyll (Bchl) *a* (Matthews, B., Fenna, R., Bolognesi, M., Schmid, M. & Olson, J. *J. Mol. Biol.* **131**, 259-285 (1979)). Thus, 111 Cα positions have equivalent positions in the two proteins despite the absence of any sequence identity (Fig. 4b). The domain is about half the size of Bchl *a* which has a single domain structure without major extensions. Like Bchl *a*, the shape of the N-terminal domain resembles an envelope (or Taco) with a hollow inside and in Bchl *a*, 7 bacteriochlorophylls are buried in this cavity. However, the domain is not as hollow as BChl *a* since loop 135-155, which contains a small helical segment, is turned inwards and fills up the core. In BChl *a* the equivalent loop (290–305) is positioned more towards the exterior of the protein, thereby leaving space for some of the tertrapyrroles of the bacteriochlorophylls. The large sheet (17 strands) of Bchl *a* is truncated to only 7 strands in LTA4 hydrolase. Especially the region between residue 35 and 263 of Bchl *a* has been replaced by a much shorter region in LTA4 hydrolase (res. 45 to 98) that forms the 3 stranded small β-sheet and the edge strand of the larger 7 stranded β-sheet. The structure of the other half of the molecule is almost completely conserved, except the insertion of two extra strands instead of loops in LTA4 hydrolase. The structural homology between Bchl *a*, a protein involved in light harvesting, and LTA4 hydrolase was certainly unexpected. In LTA4 hydrolase, the function of the N-terminal domain is not yet known, but one may speculate that it participates in binding to hydrophobic molecules or surfaces

with a possible regulatory function. In mammalian 15-lipoxygenase, a similar function was proposed for an N-terminal β-barrel domain with structural homology to a corresponding C-terminal domain in mammalian lipases (Gillmor, S.A., Villasenor, A., Fletterick, R., Sigal, E. & Browner, M.F. *Nature Struc. Biol.* 4, 1003-1009 (1997)).

The connection from the N-terminal to the catalytic domain is very short, a strand from the 4 stranded β-sheet connects into a strand of a 5-stranded anti-parallel β-sheet of the catalytic domain. The two sheets are closely packed and the interface is mainly hydrophobic in character with 14 hydrophobic residues contributing from the N-terminal domain and 11 from the catalytic domain. Hydrogen bonds occur between Gln116 and Ser264, Ser124 and Gln226, the backbone of Ser124 and Glu223, the backbone of Ser151 and Lys309, Lys153 and the backbone of Leu305 and indirectly through a water molecule between Tyr130 and the backbone of Val260. Two salt-bridges between His139 and Asp375 and between Arg174 and Asp257 complete the interactions made in this interface.

4.3 The catalytic domain contains the zinc binding site and is structurally similar to thermolysin

The structure of the catalytic domain (res. 210-450) is surprisingly similar to the structure of thermolysin (Fig. 5a & b) (Holmes, M. & Matthews, B. *J. Mol. Biol.* **160**, 623-639 (1982)). When the amino acid sequence in this domain was compared with that of thermolysin, the sequence identity was found to be very low (essentially confined to the zinc binding motifs). However, the structural homology stretches out over the whole domain. Thus, no less than 146 Ca positions overlap with an r.m.s. deviation of 1.946 Å. Like thermolysin, the catalytic domain consists of two lobes, one mainly a-helical and one mixed a/b lobe. The a-lobe consists of 6 major helices interconnected by long loops containing smaller helical segments, while the a/b lobe has a 5 stranded mixed β-sheet lined with 3 helices on one side. The zinc binding site is found in between the two lobes. Since this domain contains only 245 amino acids and thermolysin contains 314 residues, some truncations have taken place,

especially in the a/b lobe in which the N-terminal extended b structure is truncated and only a mixed 5 stranded β-sheet remains. The changes in the a-lobe are smaller. Here the long meandering loop 181 to 221 has been replaced by a long a-helix and the b-hairpin from 245 to 258 has been deleted.

A loop in extended conformation on the surface of the protein from 451 to 463 connects the catalytic domain with the C-terminal domain. Interestingly, this segment contains a highly conserved proline rich motif P451-G-f-P-P-x-K-P-x-Y460 which bears some resemblance to an SH3 domain recognition sequence. However, the canonical arginine residue is not present on either side of the proline motif. Nevertheless, since this stretch of amino acids is exposed on the surface of the protein, it is still possible that it could serve as an anchoring site for protein-protein interactions.

The C-terminal domain (464-610) is composed of 9 a-helices that form an unusual coil of helices reminiscent of the ones found in lytic transglycosylase[40] and recently in the armadillo repeat region of b-catenin (Huber, A.H., Nelson, W.J. & Weis, W.I. *Cell* **90**, 871-882 (1997)) (Fig. 6). The helices pack into two layers of parallel helices (5 inner and 4 outer helices) and in an anti-parallel manner between the two layers. The arrangements found in the two other proteins are much larger and form super-helical structures. In the C-terminal domain of LTA4 hydrolase, the arrangement is more straight and has a very compact shape. One of the helices is deformed and one of the interconnecting loops is long and contains a small 310 helix. The domain makes contacts with both the a-lobe of the catalytic domain and one of the edges of the N-terminal domain. It is positioned in a way such that the helices lie perpendicular to the 7 stranded b-sheet of the N-terminal domain and to most of the helices in the catalytic domain. The helices are amphipatic in character, with the hydrophobic sides towards the middle of the domain and hydrophilic residues pointing towards the solvent and into the deep cleft in the middle of the

whole molecule. This side of the cleft is highly polar; 10 Arg and Lys residues and 4 Asp and Glu residues are positioned on this side.

4.4 Zinc coordination

The immediate surroundings of the active site Zn^{2+} ion are very similar in thermolysin and LTA4 hydrolase. The Zn^{2+} is bound between the two lobes and is coordinated by His295, His299, one carboxylic oxygen of Glu318 and the carbonyl and hydroxyl oxygens of the inhibitor bestatin so that a square based pyramid is formed. The two histidines originate from a long a-helix and the glutamate from a neighboring a-helix, all in the a-lobe. Glu296 and Tyr383, two residues implicated in the reaction mechanism for the peptide cleaving activity, are located near the Zn ion. Glu296, the putative general base, is positioned next to the metal ligand His295 and bends over the bestatin molecule and Tyr383, which was described as a proton donor, also makes contact with the bestatin molecule (Figure 8a).

Interestingly, the second layer around the Zn ion shows differences between thermolysin and LTA4 hydrolase. In both enzymes the orientation of the zinc binding ligands is fixed by hydrogen bonds, however the hydrogen bond acceptors are positioned differently. In thermolysin, the Nd1 of His142 is hydrogen bonded to the Od2 of Asp170, while in LTA4 hydrolase the Nd1 of His295 is hydrogen bonded to the Oe1 of Glu325. This residue comes from a structural equivalent to the helix carrying Asp170 in thermolysin, but is shifted half a turn outwards. The Nd1 of His146 in thermolysin is hydrogen bonded to the Od1 of Asn165. This residue is part of the zinc binding signature and is conserved between the two enzymes. However, in LTA4 hydrolase the helix in which this conserved residue is placed has been rotated slightly and Asn317 is no longer making a hydrogen bond to His299. The orientation of His299 is now fixed by a hydrogen bond from the Nd1 to the carbonyl backbone oxygen of Thr302. The Od1 of Asn317 makes instead a hydrogen bond to the backbone amide of Asn381 while the Nd2 makes a hydrogen bond to the hydroxyl group of Tyr200. The last protein-ligand, Glu166 is in

thermolysin hydrogen bonded to Tyr157 and a water molecule, in LTA4 hydrolase, Glu318 is only hydrogen bonded to a water molecule (Fig. 7).

4.5 Bestatin binding

Although the zinc binding site is formed by residues only from the catalytic domain and most catalytic residues also come from this domain, the active site itself is surrounded by loops from all three domains. The binding of bestatin reflects this, since it makes interactions with residues from all three domains. The main interactions of bestatin are made through the carbonyl and hydroxyl oxygens to the Zn atom. Hydrophobic interactions are made between the phenyl moiety and the phenyl rings of Tyr267, Phe316, Tyr378 and Tyr383. Also, Met270 and Gln136 are involved (Fig. 8a). The other end of the inhibitor is pointing towards the solvent, the leucine moiety makes interactions with Val292 and His295, while the carboxylic oxygens make interactions with Arg563 and Lys565 through water molecules as well as hydrogen bonds to the backbone nitrogen atoms of Gly268 and Gly269. Hydrogen bonds are formed between the peptidyl N of bestatin and Oe2 of Glu296 and between the terminal NH_2 and the Oe1 of Glu271 and Oe1 of Gln136. The hydroxyl oxygen makes apart from the interaction with the Zn ion also an interaction to the OH of Tyr383. (For schematic overview see Fig. 8b). Tyr378 which gets modified during suicide inactivation sits slightly further away, but makes a hydrogen bond to Tyr383 and some hydrophobic interactions with the phenyl ring of the inhibitor. These two tyrosine are both found on the same stretch of amino-acids that in thermolysin form a long a helix, however in leukotriene hydrolase this helix is interrupted and two turns of the helix are replaced by three residues (378-380) in an extended conformation. The binding of bestatin is quite different as was found in the complex between bestatin and bovine lens leucine amino-peptidase (blLAP) (Burley, S., David, P., Sweet, R., Taylor, A. & Lipscomb, W. *J. Mol. Biol.* **224**, 113-140 (1992)). In that complex, bestatin was bound to the Zn by both the terminal nitrogen and the nonproteinaceous P1 hydroxyl oxygen, while in LTA4 hydrolase the bestatin is bound by the hydroxyl and carbonyl oxygens. The terminal nitrogen is involved in hydrogen bonding to Glu271 and Gln136. These differences

could stem from the fact the blLAP is a bimetal protein with a different reaction mechanism. Moreover the binding of bestatin as seen in LTA4 hydrolase is similar with the complexes formed between thermolysin and hydroxamates which also act as bidentate ligands by the hydroxyl and carbonyl oxygens (Holmes, M. & Matthews, B. *Biochemistry* **20** (1981)).

Behind the pocket in which the phenyl ring of bestatin binds, there is a cavity that stretches 15 Å deeper into the protein and is approximately 6 to 7 Å wide. In the present structure this cavity is filled with water molecules. It has however a very hydrophobic nature and is lined with Trp311, Phe314, Trp315 Phe362, Leu365, Val367, Leu369, Pro374, Ala377, Tyr378, and Pro382. Most of these residues are strictly conserved or conserved in nature in all LTA4 hydrolase sequences known up until now, with the exception of Val367, which is replaced by a Gln in the yeast and *C. elegans* sequences. Interestingly space for this cavity is partly created by the interruption by the extended conformation in the stretch where Tyr378 and Tyr383 are found. One patch of this binding site is quite hydrophilic with Asn134, Asp375 and the OH of Tyr267 clustering together. This bigger cavity could be a binding site for the LTA4 substrate molecule. If the epoxide moiety would bind in a similar way as the carbonyl oxygen of bestatin to the Zn ion, then the hydrophobic tail would fit snugly into the binding site now occupied by the phenyl group of bestatin and would continue into the deeper hydrophobic cavity (Fig. 9a). The other tail would sit in the pocket that is now occupied by the carboxy group of bestatin and it would be long enough for the carboxylic acid to make direct electrostatic interactions with the conserved Arg563 and Lys565.

The replacement of Val367 by Gln as seen in the enzyme from yeast would make the hydrophobic channel shorter and this might be one of the reasons why the yeast enzyme does not have leukotriene A4 epoxide hydrolase activity. The manner in which the leukotriene molecule would bind is similar as what is proposed for binding of arachidonic acid in 15-lipoxygenase (Gillmor, S.A., Villasenor, A.,

Fletterick, R., Sigal, E. & Browner, M.F. *Nature Struc. Biol.* 4, 1003-1009 (1997)) with the hydrophobic end buried inside the protein and the carboxylic acid more towards the surface making interactions with Arg and Lys residues.

The binding of bestatin acts also as a guide for the binding of peptide substrate molecules. From systematic binding studies with tri-peptides it was shown that the enzyme has a strong preference for an arginine residue as the N-terminal residue and for several tri-peptides the enzyme has a kcat/Km ratio 10-fold the kcat/Km for LTA4 (Örning, L., Gierse, J.K. & Fitzpatrick, F.A. *J. Biol. Chem.* **269**, 11269-11273 (1994). If we roughly model a peptide in the active site with an N-terminal Arg with the carbonyl oxygen sitting on the place of the hydroxyl group of bestatin, then the Arg side-chain of this residue would sit in the same place as the phenyl group of the bestatin with the guanidinium headgroup interacting with the conserved Asp375 and the OH of Tyr267 and the more hydrophobic Cb, Cd and Cg atoms making similar interactions as the phenyl ring. The terminal aminogroup could make the same electrostatic interaction as the terminal aminogroup of bestatin with Asp271 and Gln136. This mode of binding of bestatin is in contrast with the mode proposed by Örning, since the phenyl ring seems to occupy the S1 pocket. We also propose that the LTA4 substrate molecule is occupying all three pockets, S1, S'1 and S'2.

If the binding mode of peptides in LTA4 hydrolase is compared with the one described for thermolysin, a number of differences are observed. In thermolysin, the peptide molecule is held in place by many interactions to the main chain atoms provides by Asn112, Ala203, Arg203 and Trp115. None of these residues or equivalent residues can be found in the binding site in LTA4 hydrolase. Furthermore, although binding pockets S1 and S'1 are at similar positions as in thermolysin, site S'2 has to be different since its space is occupied by Tyr378 in LTA4 hydrolase. Glu271 and Gln136 and the N-terminal domain are filling up the space into which in thermolysin the upstream peptide binds contributing to the exo-peptidase function instead of an endo-peptidase function as in thermolysin.

4.6 Putative Phosphorylation site

Recently specific phosphorylation by a yet unknown specific kinase of Ser415 has been described as means of regulation of LTA4 hydrolase activity in endothelial cells (Rybina, I.V., Liu, H., Gor, Y. & Feinmark, S.J. *J Biol Chem* **272**, 31865-71 (1997)). This residue is conserved in all mammalian LTA4 hydrolases and is embedded in a highly homologous stretch of residues. Phosphorylation of this residue seems to inhibit the epoxide hydrolase activity but not the amino-peptidase activity. In the structure this residue is located in a loop connecting two a-helices that lie on the surface of the molecule. The loop itself is located at the back of the enzyme.

4.7 Aminopeptidase activity

The amino-peptidase activity catalyzed by this enzyme has been well studied and many of the important residues have been target for site-directed mutagenesis work. This lead to a proposal in which Glu296 would act as a general base (Wetterholm, A., *et al. Proc Natl Acad Sci U S A* **89**, 9141-9145 (1992)) and Tyr383 as a putative proton donor (Blomster, M., Wetterholm, A., Mueller, M.J. & Haeggström, J.Z. *Eur. J. Biochem.* **231**, 528-534 (1995)). In the current complex, these residues are involved in hydrogen bonds with the bestatin molecule. If bestatin binding is seen as a rough analog for the transition state binding, then the interaction of Glu296 with the hydroxyl oxygen of bestatin indicates that this residue could indeed activate a water-molecule for the nucleophilic attack. The role of Tyr383 cannot so easily be confirmed, however its position strongly suggest the role of proton donor. In ther-

molysin the proton donor is His231 and although the Ca position of this residue is 4.1Å removed from the Ca position of Tyr383 in LTA4 hydrolase, the Nd1 is only 1 Å removed from the OH position of Tyr383. The conserved Glu271 could be involved in the exo-protease activity of the protein. Recently, the analogous Glu350 in aminopeptidase N and Glu352 in aminopeptidase A were subject to site-directed mutagenesis work (Luciani, N., *et al. Biochemistry* **37**, 686-692 (1998); and Vazeux, G., Iturrioz, X., Corvol, P. & Llorenz-Cortez, C. *Biochem. J.* **334**, 407-413 (1998)) and it was observed that mutations of this residue lead to large decreases in the activity in the case of substitutions by conserved amino-acids such as aspartate and glutamine and absence of activity in substitution by alanine. It was concluded that Glu350 belonged to the anionic binding site in that protein. A mechanism based on thermolysin was proposed for aminopeptidase N with a pentavalent transition state with an additional interaction between the free a-aminogroup and Glu350. In this structure we can observe such an interaction between Glu271 and the free aminogroup of bestatin. Furthermore the penta-valent coordination of Zn by the His295, His299, Glu318 and the carbonyl and hydroxyl groups of bestatin indicates that this is an equivalent transition state analog complex as determined previously for thermolysin.

From careful sequence alignments and structural insight we can conclude that the enzymes in the M1 family of proteases will share a highly conserved catalytic domain that includes part of the N-terminal domain as we see it in LTA4 hydrolase and the thermolysin-like domain. There is no homology for residues in the C-terminal domain and we believe that this domain is unique for LTA4 hydrolases. We suggest that all proteases belonging to class M1 with the signature HExxH and a Glu 18 residues downstream will function in a similar way to thermolysin.

4.8 Epoxide hydrolase activity

Concerning the epoxide hydrolase activity, much less is known about the functional elements and mechanisms of catalysis. In fact, the prosthetic zinc is the only critical component identified thus far and may potentially assist in the introduction of a water molecule at C12 or in the activation of the epoxide. Although Tyr378 and Tyr383 are important active side residues, none of them is essential for catalysis. A mutation of Tyr378 to Phe protects the enzyme against suicide inhibition, however the specificity of the double bond configuration is partly lost (Mueller, M., Andberg, M., Samuelsson, B. & Haeggstrom, J. *J. Biol. Chem.* **271**, 24345-24348 (1996)) since a novel metabolite with a cis-trans-cis conjugated system can be detected. Thus, Tyr378 is a major binding site for LTA4 during suicide inactivation and seems to play a role for the formation of the correct double bond geometry in the product LTB4. Mutations of Tyr383 abolish the amino-peptidase activity where it has a role as potential proton donor (*vide supra*) but the epoxide hydrolase activity is only decreased compared to wild-type. It is however implicated in the stereospecific introduction of water during the hydrolysis of LTA4 to LTB4 since these mutants convert LTA4 in both LTB4 and 5 [S],6 [S]-DHETE (Andberg, M., Hamberg, M. & Haeggstrom, J. *J. Biol. Chem.* **272**, 23057-23063 (1997)). Moreover careful analysis of the catalytic properties of enzymes mutated in pos. 383, *viz* [Y383F], [Y383H] and [Y383Q]LTA4 hydrolase have indicated that the epoxide hydrolase reaction follows an SN1 mechanism.

If one considers the chemistry carried out by LTA4 hydrolase, the enzyme has two major tasks during the hydrolysis of LTA4 to LTB4. First introduction of a water molecule stereospecific at C12 and second to generate a *cis*-double bond Æ6 in the resulting conjugated triene system [cf. Fig. 1]. If LTA4 is modeled into the putative substrate binding pocket as indicated in figure 9b, the catalytic zinc gets close to the epoxide and not C12 of the substrate. Therefore the most likely role of the Zn ion is to act directly as a Lewis acid to activate and open the epoxide ring. This would generate a carbocation, whose charge will be delocalised over the

conjugated triene system from C7 to C12. Since this intermediate has an *sp2* hydridized planar configuration at C12, it is in principle open for nucleophilic attack from either side of the molecule. The conserved Asp375 is positioned in such a way that a water molecule bound to it is in "attacking" distance of C12 of a modeled LTA4 molecule, the position into which a hydroxyl group is inserted during the reaction. This will account for the proper stereo-chemical and positional insertion of the hydroxyl-group at C12 in *R* configuration.

The shape and curvature of the LTA4 binding pocket also gives a clue as to how the enzyme creates the *cis* double bond at Æ6. Since there is free rotation between the c6 and c7 of LTA4, this bond may be kept in a "pro-cis" configuration in the transition state, which in turn would facilitate the formation of a Æ6-*cis* double bond form the carbocation intermediate. If LTA4 is modeled in this way, the entire molecule adopts a bent shape, fitting very well with the architecture of the binding pocket (Fig. 9b). Hence, the critical double bond geometry at Æ6 of LTB4 is probably guaranteed by the exact binding conformation of LTA4 at the active side which in turn is governed by all the structural elements participating in substrate binding, including the carboxylate recognition sites, Arg56 and Lys565, the catalytic zinc and the hydrophobic residues lining the pocket. The putative binding cleft for the leukotriene molecule is narrow and bend and thereby favoring LTA4 over other epoxides. The two tyrosines are positioned such that they are in contact with the triple double bond configuration of a modeled LTA4 molecule at the bent of the putative binding pocket and they are hydrogen-bonded to each other. Therefore their position is ideal for guidance in stereo-specificity of the double bond configuration. The loss of specificity for the hydroxyl-incorporation at the C12 position in case of the Tyr383 position can be explained that mutations at this position would possibly create extra space for a water molecule that could attack at the C6 position and thereby form 5 [S],6 [S]-DHETE.

The position of Tyr378 is such that it is in contact with the C6 atom of the modeled LTA4 molecule. If after opening of the epoxide ring the hydroxyl group of Tyr378 instead of a water molecule would attack the carbon-cation at the C6 position, a covalently attached molecule is formed which forms the suicide inhibited complex. In order to check this hypothesis and to obtain more information about the binding-site for leukotriene A4, the structure of this inhibited species would be essential.

In order to exclude the possibility that residues near the active site might have further catalytic roles in the epoxide hydrolase reaction, a thorough investigation of these residues, such as Glu271 and Gln136 has to be started. Furthermore the proposed role of Asp375 in activating a water molecule for the stereospecific attack at C12 has to be investigated.

Accordingly, the present invention has solved the first specific leukotriene converting enzyme, which for the first time reveals the binding mode for leukotriene molecules. Furthermore, insight is provided in a unique active site that harbours two activities using different amino-acids to catalyze different reactions.

5. SEQUENCE LISTING

<110> Haeggström, Jesper J.Z., et al

<120> DRUG DESIGN BASED ON THE STRUCTIRE OF LTA_4 HYDROLASE

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Arg Thr Leu Thr Gly Thr Ala Ala Leu Thr Val Gln Ser Gln Glu Asp
35 40 45

Asn Leu Arg Ser Leu Val Leu Asp Thr Lys Asp Leu Thr Ile Glu Lys
50 55 60

Val Val Ile Asn Gly Gln Glu Val Lys Tyr Ala Leu Gly Glu Arg Gln
65 70 75 80

Ser Tyr Lys Gly Ser Pro Met Glu Ile Ser Leu Pro Ile Ala Leu Ser
85 90 95

Lys Asn Gln Glu Ile Val Ile Glu Ile Ser Phe Glu Thr Ser Pro Lys
100 105 110

Ser Ser Ala Leu Gln Trp Leu Thr Pro Glu Gln Thr Ser Gly Lys Glu
115 120 125

His Pro Tyr Leu Phe Ser Gln Cys Gln Ala Ile His Cys Arg Ala Ile
130 135 140

Leu Pro Cys Gln Asp Thr Pro Ser Val Lys Leu Thr Tyr Thr Ala Glu
145 150 155 160

Val Ser Val Pro Lys Glu Leu Val Ala Leu Met Ser Ala Ile Arg Asp
165 170 175

Gly Glu Thr Pro Asp Pro Glu Asp Pro Ser Arg Lys Ile Tyr Lys Phe
180 185 190

Ile Gln Lys Val Pro Ile Pro Cys Tyr Leu Ile Ala Leu Val Val Gly
195 200 205

Ala Leu Glu Ser Arg Gln Ile Gly Pro Arg Thr Leu Val Trp Ser Glu
210 215 220

Lys Glu Gln Val Glu Lys Ser Ala Tyr Glu Phe Ser Glu Thr Glu Ser
225 230 235 240

Met Leu Lys Ile Ala Glu Asp Leu Gly Gly Pro Tyr Val Trp Gly Gln
245 250 255

Tyr Asp Leu Leu Val Leu Pro Pro Ser Phe Pro Tyr Gly Gly Met Glu
260 265 270

Asn Pro Cys Leu Thr Phe Val Thr Pro Thr Leu Leu Ala Gly Asp Lys
275 280 285

Ser Leu Ser Asn Val Ile Ala His Glu Ile Ser His Ser Trp Thr Gly
290 295 300

Asn Leu Val Thr Asn Lys Thr Trp Asp His Phe Trp Leu Asn Glu Gly
305 310 315 320

His Thr Val Tyr Leu Glu Arg His Ile Cys Gly Arg Leu Phe Gly Glu

325 330 335

Lys Phe Arg His Phe Asn Ala Leu Gly Gly Trp Gly Glu Leu Gln Asn
340 345 350

Ser Val Lys Thr Phe Gly Glu Thr His Pro Phe Thr Lys Leu Val Val
355 360 365

Asp Leu Thr Asp Ile Asp Pro Asp Val Ala Tyr Ser Ser Val Pro Tyr
370 375 380

Glu Lys Gly Phe Ala Leu Leu Phe Tyr Leu Glu Gln Leu Leu Gly Gly
385 390 395 400

Pro Glu Ile Phe Leu Gly Phe Leu Lys Ala Tyr Val Glu Lys Phe Ser
405 410 415

Tyr Lys Ser Ile Thr Thr Asp Asp Trp Lys Asp Phe Leu Tyr Ser Tyr
420 425 430

Phe Lys Asp Lys Val Asp Val Leu Asn Gln Val Asp Trp Asn Ala Trp
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Leu Tyr Ser Pro Gly Leu Pro Pro Ile Lys Pro Asn Tyr Asp Met Thr
450 455 460

Leu Thr Asn Ala Cys Ile Ala Leu Ser Gln Arg Trp Ile Thr Ala Lys
465 470 475 480

Glu Asp Asp Leu Asn Ser Phe Asn Ala Thr Asp Leu Lys Asp Leu Ser
485 490 495

Ser His Gln Leu Asn Glu Phe Leu Ala Gln Thr Leu Gln Arg Ala Pro
500 505 510

Leu Pro Leu Gly His Ile Lys Arg Met Gln Glu Val Tyr Asn Phe Asn
515 520 525

Ala Ile Asn Asn Ser Glu Ile Arg Phe Arg Trp Leu Arg Leu Cys Ile
530 535 540

Gln Ser Lys Trp Glu Asp Ala Ile Pro Leu Ala Leu Lys Met Ala Thr
545 550 555 560

Glu Gln Gly Arg Met Lys Phe Thr Arg Pro Leu Phe Lys Asp Leu Ala
565 570 575

Ala Phe Asp Lys Ser His Asp Gln Ala Val Arg Thr Tyr Gln Glu His
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Lys Ala Ser Met His Pro Val Thr Ala Met Leu Val Gly Lys Asp Leu
595 600 605

Lys Val Asp
610

6. CONFORMATIONAL DATA

Table 9: Structure coordinates of LTA_4 hydrolase-bestatin complex

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ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.014796  0.000000  0.000000        0.00000
SCALE2      0.000000  0.007490  0.000000        0.00000
SCALE3      0.000000  0.000000  0.011990        0.00000

          Atom res. Chain No.    x       y       z       occ   B-factor

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ATOM     11  O   GLU A   2      -2.129  22.438  67.174  1.00 88.87
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ATOM     15  OE1 GLU A   2      -2.011  22.486  62.601  1.00 70.64
ATOM     16  OE2 GLU A   2      -3.487  21.008  61.722  1.00 83.56
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ATOM     21  CB  ILE A   3       1.014  24.323  65.649  1.00 73.58
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ATOM     71  CB  ALA A  10      -6.365  35.297  59.334  1.00 18.72
ATOM     72  N   SER A  11      -8.066  32.886  59.190  1.00 26.45
ATOM     73  CA  SER A  11      -8.239  31.460  59.014  1.00 27.04
ATOM     74  C   SER A  11      -6.821  30.862  58.977  1.00 19.63
ATOM     75  O   SER A  11      -5.931  31.368  58.288  1.00 20.98
ATOM     76  CB  SER A  11      -8.972  31.228  57.683  1.00 34.23
ATOM     77  OG  SER A  11     -10.377  31.332  57.861  1.00 36.98
ATOM     78  N   PRO A  12      -6.609  29.777  59.689  1.00 20.69
ATOM     79  CA  PRO A  12      -5.293  29.146  59.759  1.00 23.75
ATOM     80  C   PRO A  12      -4.838  28.466  58.479  1.00 32.70
ATOM     81  O   PRO A  12      -5.628  28.213  57.566  1.00 34.79
ATOM     82  CB  PRO A  12      -5.378  28.124  60.898  1.00 24.49
ATOM     83  CG  PRO A  12      -6.850  27.923  61.197  1.00 26.79
ATOM     84  CD  PRO A  12      -7.620  28.984  60.422  1.00 18.71
ATOM     85  N   ALA A  13      -3.542  28.158  58.424  1.00 28.05
ATOM     86  CA  ALA A  13      -2.958  27.522  57.254  1.00 26.23
ATOM     87  C   ALA A  13      -3.575  26.147  56.955  1.00 22.95
ATOM     88  O   ALA A  13      -3.463  25.623  55.868  1.00 25.46
ATOM     89  CB  ALA A  13      -1.432  27.511  57.312  1.00 24.61
ATOM     90  N   SER A  14      -4.227  25.555  57.935  1.00 21.79
ATOM     91  CA  SER A  14      -4.840  24.254  57.758  1.00 23.68
ATOM     92  C   SER A  14      -6.239  24.371  57.129  1.00 32.59
ATOM     93  O   SER A  14      -6.977  23.401  56.944  1.00 34.73
ATOM     94  CB  SER A  14      -4.921  23.533  59.102  1.00 26.34
ATOM     95  OG  SER A  14      -5.722  24.269  60.022  1.00 28.63
ATOM     96  N   VAL A  15      -6.632  25.589  56.814  1.00 28.74
ATOM     97  CA  VAL A  15      -7.913  25.838  56.183  1.00 29.68
ATOM     98  C   VAL A  15      -7.714  26.415  54.790  1.00 28.85
ATOM     99  O   VAL A  15      -8.284  25.983  53.793  1.00 30.55
ATOM    100  CB  VAL A  15      -8.736  26.750  57.064  1.00 33.16
ATOM    101  CG1 VAL A  15      -9.867  27.390  56.256  1.00 32.75
ATOM    102  CG2 VAL A  15      -9.232  25.957  58.267  1.00 30.08
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SUBSTITUTE SHEET (RULE 26)

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ATOM    103  N   CYS A  16      -6.856  27.406  54.714  1.00 22.64
ATOM    104  CA  CYS A  16      -6.559  28.009  53.440  1.00 25.21
ATOM    105  C   CYS A  16      -5.237  28.693  53.559  1.00 29.42
ATOM    106  O   CYS A  16      -4.779  28.929  54.690  1.00 29.35
ATOM    107  CB  CYS A  16      -7.621  28.958  52.872  1.00 29.68
ATOM    108  SG  CYS A  16      -7.936  30.421  53.895  1.00 35.74
ATOM    109  N   ARG A  17      -4.637  28.959  52.405  1.00 23.28
ATOM    110  CA  ARG A  17      -3.332  29.581  52.397  1.00 27.42
ATOM    111  C   ARG A  17      -3.224  30.603  51.288  1.00 29.92
ATOM    112  O   ARG A  17      -3.516  30.317  50.133  1.00 30.00
ATOM    113  CB  ARG A  17      -2.205  28.555  52.227  1.00 23.72
ATOM    114  CG  ARG A  17      -2.233  27.401  53.201  1.00 21.97
ATOM    115  CD  ARG A  17      -1.407  26.256  52.647  1.00 23.54
ATOM    116  NE  ARG A  17      -0.812  25.328  53.619  1.00 61.25
ATOM    117  CZ  ARG A  17      -1.432  24.397  54.351  1.00 74.57
ATOM    118  NH1 ARG A  17      -2.727  24.196  54.302  1.00 81.15
ATOM    119  NH2 ARG A  17      -0.734  23.629  55.172  1.00 66.19
ATOM    120  N   THR A  18      -2.752  31.787  51.640  1.00 19.72
ATOM    121  CA  THR A  18      -2.591  32.805  50.644  1.00 16.81
ATOM    122  C   THR A  18      -1.334  32.493  49.887  1.00 26.15
ATOM    123  O   THR A  18      -0.323  32.299  50.512  1.00 28.80
ATOM    124  CB  THR A  18      -2.466  34.204  51.296  1.00 25.57
ATOM    125  OG1 THR A  18      -3.626  34.537  52.038  1.00 29.71
ATOM    126  CG2 THR A  18      -2.186  35.291  50.261  1.00 23.47
ATOM    127  N   LYS A  19      -1.361  32.518  48.568  1.00 23.41
ATOM    128  CA  LYS A  19      -0.185  32.210  47.806  1.00 21.13
ATOM    129  C   LYS A  19       0.459  33.389  47.154  1.00 22.88
ATOM    130  O   LYS A  19       1.643  33.365  46.806  1.00 26.65
ATOM    131  CB  LYS A  19      -0.542  31.198  46.727  1.00 29.31
ATOM    132  CG  LYS A  19      -1.357  30.002  47.207  1.00 38.67
ATOM    133  CD  LYS A  19      -0.856  29.376  48.505  1.00 83.39
ATOM    134  CE  LYS A  19       0.228  28.313  48.317  1.00100.00
ATOM    135  NZ  LYS A  19       0.082  27.127  49.186  1.00 95.09
ATOM    136  N   HIS A  20      -0.334  34.419  46.949  1.00 19.69
ATOM    137  CA  HIS A  20       0.217  35.576  46.285  1.00 19.81
ATOM    138  C   HIS A  20      -0.586  36.810  46.644  1.00 28.29
ATOM    139  O   HIS A  20      -1.767  36.712  47.018  1.00 30.86
ATOM    140  CB  HIS A  20       0.093  35.392  44.758  1.00 17.26
ATOM    141  CG  HIS A  20       0.795  36.466  44.024  1.00 19.73
ATOM    142  ND1 HIS A  20       2.171  36.455  43.885  1.00 22.73
ATOM    143  CD2 HIS A  20       0.305  37.600  43.437  1.00 20.99
ATOM    144  CE1 HIS A  20       2.491  37.554  43.201  1.00 21.23
ATOM    145  NE2 HIS A  20       1.386  38.269  42.903  1.00 20.99
ATOM    146  N   LEU A  21       0.073  37.954  46.508  1.00 25.18
ATOM    147  CA  LEU A  21      -0.585  39.209  46.747  1.00 28.41
ATOM    148  C   LEU A  21      -0.211  40.147  45.656  1.00 28.28
ATOM    149  O   LEU A  21       0.974  40.321  45.363  1.00 26.48
ATOM    150  CB  LEU A  21      -0.249  39.882  48.102  1.00 32.02
ATOM    151  CG  LEU A  21      -0.533  41.395  48.217  1.00 34.40
ATOM    152  CD1 LEU A  21      -1.979  41.712  48.615  1.00 30.29
ATOM    153  CD2 LEU A  21       0.389  42.000  49.268  1.00 32.78
ATOM    154  N   HIS A  22      -1.244  40.728  45.062  1.00 28.64
ATOM    155  CA  HIS A  22      -1.000  41.741  44.057  1.00 30.85
ATOM    156  C   HIS A  22      -1.517  43.012  44.701  1.00 30.38
ATOM    157  O   HIS A  22      -2.696  43.102  45.056  1.00 30.58
ATOM    158  CB  HIS A  22      -1.554  41.551  42.611  1.00 31.85
ATOM    159  CG  HIS A  22      -1.182  42.743  41.778  1.00 32.51
ATOM    160  ND1 HIS A  22      -2.120  43.577  41.209  1.00 35.74
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ATOM    161  CD2 HIS A  22       0.035  43.261  41.489  1.00 36.85
ATOM    162  CE1 HIS A  22      -1.463  44.545  40.580  1.00 36.22
ATOM    163  NE2 HIS A  22      -0.152  44.400  40.736  1.00 37.12
ATOM    164  N   LEU A  23      -0.583  43.938  44.898  1.00 29.56
ATOM    165  CA  LEU A  23      -0.842  45.192  45.558  1.00 30.11
ATOM    166  C   LEU A  23      -0.590  46.398  44.661  1.00 32.22
ATOM    167  O   LEU A  23       0.486  46.685  44.121  1.00 32.37
ATOM    168  CB  LEU A  23      -0.018  45.260  46.884  1.00 30.21
ATOM    169  CG  LEU A  23      -0.410  46.274  47.982  1.00 33.02
ATOM    170  CD1 LEU A  23       0.663  47.343  48.117  1.00 32.82
ATOM    171  CD2 LEU A  23      -1.745  46.956  47.745  1.00 38.23
ATOM    172  N   ARG A  24      -1.656  47.133  44.534  1.00 34.49
ATOM    173  CA  ARG A  24      -1.632  48.369  43.784  1.00 38.52
ATOM    174  C   ARG A  24      -2.194  49.370  44.783  1.00 40.35
ATOM    175  O   ARG A  24      -3.268  49.139  45.369  1.00 36.87
ATOM    176  CB  ARG A  24      -2.487  48.307  42.521  1.00 45.90
ATOM    177  CG  ARG A  24      -1.833  47.544  41.371  1.00 63.78
ATOM    178  CD  ARG A  24      -2.551  47.750  40.046  1.00 88.27
ATOM    179  NE  ARG A  24      -3.826  47.027  39.967  1.00 96.90
ATOM    180  CZ  ARG A  24      -5.046  47.558  40.154  1.00100.00
ATOM    181  NH1 ARG A  24      -5.263  48.853  40.383  1.00100.00
ATOM    182  NH2 ARG A  24      -6.104  46.743  40.069  1.00100.00
ATOM    183  N   CYS A  25      -1.426  50.431  45.031  1.00 39.47
ATOM    184  CA  CYS A  25      -1.849  51.420  46.022  1.00 37.37
ATOM    185  C   CYS A  25      -1.146  52.736  45.798  1.00 36.83
ATOM    186  O   CYS A  25      -0.142  52.824  45.066  1.00 33.74
ATOM    187  CB  CYS A  25      -1.530  50.963  47.475  1.00 35.76
ATOM    188  SG  CYS A  25       0.259  50.957  47.818  1.00 38.00
ATOM    189  N   SER A  26      -1.713  53.740  46.463  1.00 36.43
ATOM    190  CA  SER A  26      -1.142  55.075  46.417  1.00 38.33
ATOM    191  C   SER A  26      -0.971  55.634  47.816  1.00 30.93
ATOM    192  O   SER A  26      -1.815  55.443  48.713  1.00 29.52
ATOM    193  CB  SER A  26      -1.828  56.089  45.502  1.00 49.53
ATOM    194  OG  SER A  26      -0.941  57.173  45.231  1.00 58.28
ATOM    195  N   VAL A  27       0.151  56.326  47.925  1.00 30.23
ATOM    196  CA  VAL A  27       0.555  56.974  49.156  1.00 31.98
ATOM    197  C   VAL A  27       0.120  58.438  49.259  1.00 34.81
ATOM    198  O   VAL A  27       0.708  59.320  48.614  1.00 36.20
ATOM    199  CB  VAL A  27       2.056  56.797  49.389  1.00 36.39
ATOM    200  CG1 VAL A  27       2.402  57.292  50.802  1.00 36.16
ATOM    201  CG2 VAL A  27       2.392  55.309  49.226  1.00 34.26
ATOM    202  N   ASP A  28      -0.915  58.693  50.070  1.00 32.47
ATOM    203  CA  ASP A  28      -1.391  60.061  50.283  1.00 32.12
ATOM    204  C   ASP A  28      -0.872  60.655  51.590  1.00 29.94
ATOM    205  O   ASP A  28      -1.385  60.375  52.668  1.00 27.16
ATOM    206  CB  ASP A  28      -2.908  60.186  50.345  1.00 35.00
ATOM    207  CG  ASP A  28      -3.313  61.619  50.120  1.00 53.22
ATOM    208  OD1 ASP A  28      -2.651  62.584  50.471  1.00 49.41
ATOM    209  OD2 ASP A  28      -4.427  61.711  49.443  1.00 71.15
ATOM    210  N   PHE A  29       0.151  61.476  51.445  1.00 26.90
ATOM    211  CA  PHE A  29       0.824  62.141  52.517  1.00 30.95
ATOM    212  C   PHE A  29       0.030  63.292  53.087  1.00 46.44
ATOM    213  O   PHE A  29       0.319  63.796  54.155  1.00 49.29
ATOM    214  CB  PHE A  29       2.100  62.723  51.935  1.00 35.58
ATOM    215  CG  PHE A  29       3.276  61.805  52.080  1.00 42.10
ATOM    216  CD1 PHE A  29       3.676  61.428  53.360  1.00 46.10
ATOM    217  CD2 PHE A  29       3.981  61.318  50.978  1.00 48.22
ATOM    218  CE1 PHE A  29       4.765  60.586  53.561  1.00 44.91
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ATOM    219  CE2 PHE A  29       5.073  60.468  51.159  1.00 52.10
ATOM    220  CZ  PHE A  29       5.465  60.115  52.451  1.00 47.34
ATOM    221  N   THR A  30      -0.968  63.747  52.360  1.00 48.35
ATOM    222  CA  THR A  30      -1.739  64.842  52.861  1.00 45.84
ATOM    223  C   THR A  30      -2.775  64.261  53.763  1.00 44.97
ATOM    224  O   THR A  30      -3.096  64.772  54.823  1.00 49.48
ATOM    225  CB  THR A  30      -2.404  65.608  51.725  1.00 55.54
ATOM    226  OG1 THR A  30      -1.559  66.700  51.398  1.00 68.26
ATOM    227  CG2 THR A  30      -3.777  66.061  52.205  1.00 46.96
ATOM    228  N   ARG A  31      -3.283  63.147  53.323  1.00 32.80
ATOM    229  CA  ARG A  31      -4.268  62.480  54.132  1.00 32.20
ATOM    230  C   ARG A  31      -3.634  61.456  55.067  1.00 32.13
ATOM    231  O   ARG A  31      -4.409  60.864  55.817  1.00 25.23
ATOM    232  CB  ARG A  31      -5.159  61.629  53.241  1.00 35.88
ATOM    233  CG  ARG A  31      -6.462  62.306  52.863  1.00 66.91
ATOM    234  CD  ARG A  31      -6.539  62.672  51.392  1.00 93.56
ATOM    235  NE  ARG A  31      -5.721  63.825  51.011  1.00 98.33
ATOM    236  CZ  ARG A  31      -6.218  64.857  50.328  1.00 89.65
ATOM    237  NH1 ARG A  31      -7.498  64.895  49.977  1.00 51.14
ATOM    238  NH2 ARG A  31      -5.436  65.878  49.985  1.00 74.59
ATOM    239  N   ARG A  32      -2.297  61.231  54.941  1.00 31.30
ATOM    240  CA  ARG A  32      -1.532  60.215  55.692  1.00 32.00
ATOM    241  C   ARG A  32      -2.237  58.877  55.522  1.00 35.90
ATOM    242  O   ARG A  32      -2.616  58.213  56.497  1.00 26.95
ATOM    243  CB  ARG A  32      -1.207  60.481  57.169  1.00 26.70
ATOM    244  CG  ARG A  32      -1.154  61.960  57.566  1.00 62.26
ATOM    245  CD  ARG A  32       0.170  62.511  58.124  1.00 84.61
ATOM    246  NE  ARG A  32       0.480  62.134  59.510  1.00 72.60
ATOM    247  CZ  ARG A  32       1.452  62.642  60.280  1.00 62.89
ATOM    248  NH1 ARG A  32       2.263  63.606  59.881  1.00 47.22
ATOM    249  NH2 ARG A  32       1.636  62.159  61.505  1.00 34.21
ATOM    250  N   THR A  33      -2.450  58.522  54.252  1.00 32.05
ATOM    251  CA  THR A  33      -3.137  57.281  53.939  1.00 31.81
ATOM    252  C   THR A  33      -2.518  56.516  52.788  1.00 38.17
ATOM    253  O   THR A  33      -1.863  57.045  51.884  1.00 40.95
ATOM    254  CB  THR A  33      -4.604  57.441  53.507  1.00 40.71
ATOM    255  OG1 THR A  33      -4.727  58.394  52.471  1.00 49.59
ATOM    256  CG2 THR A  33      -5.598  57.635  54.638  1.00 36.31
ATOM    257  N   LEU A  34      -2.804  55.231  52.887  1.00 36.61
ATOM    258  CA  LEU A  34      -2.446  54.238  51.916  1.00 37.65
ATOM    259  C   LEU A  34      -3.787  53.723  51.432  1.00 30.48
ATOM    260  O   LEU A  34      -4.667  53.249  52.175  1.00 31.53
ATOM    261  CB  LEU A  34      -1.595  53.099  52.497  1.00 39.99
ATOM    262  CG  LEU A  34      -0.159  53.091  52.033  1.00 44.09
ATOM    263  CD1 LEU A  34       0.279  51.634  52.017  1.00 42.13
ATOM    264  CD2 LEU A  34      -0.102  53.656  50.627  1.00 52.70
ATOM    265  N   THR A  35      -3.963  53.889  50.149  1.00 29.30
ATOM    266  CA  THR A  35      -5.230  53.461  49.625  1.00 34.60
ATOM    267  C   THR A  35      -5.039  52.558  48.420  1.00 39.30
ATOM    268  O   THR A  35      -4.116  52.754  47.594  1.00 36.72
ATOM    269  CB  THR A  35      -5.983  54.705  49.146  1.00 62.16
ATOM    270  OG1 THR A  35      -6.129  55.655  50.184  1.00 63.09
ATOM    271  CG2 THR A  35      -7.320  54.270  48.569  1.00 67.46
ATOM    272  N   GLY A  36      -5.923  51.576  48.315  1.00 33.04
ATOM    273  CA  GLY A  36      -5.736  50.731  47.162  1.00 32.58
ATOM    274  C   GLY A  36      -6.472  49.414  47.226  1.00 29.34
ATOM    275  O   GLY A  36      -7.502  49.276  47.901  1.00 29.27
ATOM    276  N   THR A  37      -5.871  48.454  46.512  1.00 29.27
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ATOM 277 CA THR A 37 -6.422 47.099 46.445 1.00 30.12
ATOM 278 C THR A 37 -5.399 46.039 46.733 1.00 27.15
ATOM 279 O THR A 37 -4.260 46.093 46.280 1.00 29.53
ATOM 280 CB THR A 37 -6.985 46.710 45.065 1.00 29.58
ATOM 281 OG1 THR A 37 -6.019 47.050 44.078 1.00 35.41
ATOM 282 CG2 THR A 37 -8.267 47.478 44.850 1.00 34.18
ATOM 283 N ALA A 38 -5.911 45.069 47.445 1.00 25.51
ATOM 284 CA ALA A 38 -5.117 43.938 47.811 1.00 28.59
ATOM 285 C ALA A 38 -5.727 42.723 47.142 1.00 28.95
ATOM 286 O ALA A 38 -6.743 42.181 47.580 1.00 29.76
ATOM 287 CB ALA A 38 -5.053 43.783 49.332 1.00 28.09
ATOM 288 N ALA A 39 -5.087 42.281 46.069 1.00 29.16
ATOM 289 CA ALA A 39 -5.595 41.098 45.400 1.00 28.96
ATOM 290 C ALA A 39 -4.856 39.897 45.952 1.00 32.32
ATOM 291 O ALA A 39 -3.656 39.721 45.724 1.00 31.17
ATOM 292 CB ALA A 39 -5.360 41.169 43.908 1.00 28.71
ATOM 293 N LEU A 40 -5.592 39.103 46.706 1.00 29.20
ATOM 294 CA LEU A 40 -5.003 37.945 47.317 1.00 30.98
ATOM 295 C LEU A 40 -5.327 36.648 46.592 1.00 34.18
ATOM 296 O LEU A 40 -6.498 36.316 46.393 1.00 32.36
ATOM 297 CB LEU A 40 -5.554 37.761 48.760 1.00 31.07
ATOM 298 CG LEU A 40 -5.397 38.943 49.718 1.00 31.64
ATOM 299 CD1 LEU A 40 -5.822 38.486 51.108 1.00 28.47
ATOM 300 CD2 LEU A 40 -3.944 39.386 49.725 1.00 21.87
ATOM 301 N THR A 41 -4.311 35.861 46.263 1.00 30.21
ATOM 302 CA THR A 41 -4.632 34.568 45.683 1.00 30.42
ATOM 303 C THR A 41 -4.602 33.586 46.837 1.00 35.30
ATOM 304 O THR A 41 -3.571 33.422 47.482 1.00 34.05
ATOM 305 CB THR A 41 -3.679 34.105 44.584 1.00 42.24
ATOM 306 OG1 THR A 41 -3.701 35.078 43.562 1.00 39.08
ATOM 307 CG2 THR A 41 -4.097 32.709 44.090 1.00 29.36
ATOM 308 N VAL A 42 -5.752 32.982 47.091 1.00 30.50
ATOM 309 CA VAL A 42 -5.944 32.058 48.180 1.00 30.58
ATOM 310 C VAL A 42 -6.186 30.625 47.728 1.00 38.17
ATOM 311 O VAL A 42 -6.913 30.370 46.764 1.00 37.98
ATOM 312 CB VAL A 42 -7.074 32.551 49.091 1.00 31.60
ATOM 313 CG1 VAL A 42 -7.339 31.536 50.190 1.00 30.16
ATOM 314 CG2 VAL A 42 -6.681 33.877 49.750 1.00 31.76
ATOM 315 N GLN A 43 -5.570 29.690 48.453 1.00 30.27
ATOM 316 CA GLN A 43 -5.721 28.291 48.163 1.00 28.24
ATOM 317 C GLN A 43 -6.374 27.521 49.293 1.00 30.98
ATOM 318 O GLN A 43 -5.906 27.495 50.437 1.00 30.47
ATOM 319 CB GLN A 43 -4.376 27.685 47.751 1.00 30.68
ATOM 320 CG GLN A 43 -4.447 26.152 47.645 1.00 44.61
ATOM 321 CD GLN A 43 -3.066 25.550 47.505 1.00 49.18
ATOM 322 OE1 GLN A 43 -2.652 25.101 46.429 1.00 53.81
ATOM 323 NE2 GLN A 43 -2.341 25.541 48.608 1.00 45.20
ATOM 324 N SER A 44 -7.497 26.882 48.985 1.00 25.18
ATOM 325 CA SER A 44 -8.183 26.107 49.989 1.00 20.91
ATOM 326 C SER A 44 -7.415 24.853 50.329 1.00 32.88
ATOM 327 O SER A 44 -6.657 24.358 49.493 1.00 35.47
ATOM 328 CB SER A 44 -9.552 25.704 49.511 1.00 22.65
ATOM 329 OG SER A 44 -10.157 24.911 50.512 1.00 31.76
ATOM 330 N GLN A 45 -7.630 24.344 51.546 1.00 29.62
ATOM 331 CA GLN A 45 -7.006 23.114 52.035 1.00 30.38
ATOM 332 C GLN A 45 -8.085 22.147 52.497 1.00 38.25
ATOM 333 O GLN A 45 -7.848 21.077 53.083 1.00 33.96
ATOM 334 CB GLN A 45 -6.126 23.384 53.276 1.00 30.97

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ATOM    335  CG  GLN A  45      -5.209  24.589  53.105  1.00 19.22
ATOM    336  CD  GLN A  45      -4.264  24.414  51.939  1.00 44.80
ATOM    337  OE1 GLN A  45      -4.199  25.228  50.995  1.00 46.26
ATOM    338  NE2 GLN A  45      -3.520  23.319  52.002  1.00 28.67
ATOM    339  N   GLU A  46      -9.295  22.622  52.280  1.00 38.36
ATOM    340  CA  GLU A  46     -10.494  21.931  52.674  1.00 41.96
ATOM    341  C   GLU A  46     -11.465  21.892  51.512  1.00 44.78
ATOM    342  O   GLU A  46     -11.482  22.772  50.648  1.00 38.52
ATOM    343  CB  GLU A  46     -11.225  22.681  53.828  1.00 44.36
ATOM    344  CG  GLU A  46     -10.440  22.959  55.132  1.00 56.09
ATOM    345  CD  GLU A  46     -11.309  23.520  56.226  1.00 70.52
ATOM    346  OE1 GLU A  46     -12.359  24.099  55.997  1.00 65.91
ATOM    347  OE2 GLU A  46     -10.822  23.315  57.432  1.00 89.95
ATOM    348  N   ASP A  47     -12.301  20.871  51.516  1.00 45.87
ATOM    349  CA  ASP A  47     -13.287  20.831  50.474  1.00 49.24
ATOM    350  C   ASP A  47     -14.443  21.658  50.966  1.00 50.94
ATOM    351  O   ASP A  47     -14.693  21.733  52.167  1.00 50.75
ATOM    352  CB  ASP A  47     -13.770  19.400  50.251  1.00 53.61
ATOM    353  CG  ASP A  47     -12.685  18.588  49.621  1.00 74.24
ATOM    354  OD1 ASP A  47     -12.004  19.005  48.689  1.00 70.46
ATOM    355  OD2 ASP A  47     -12.545  17.420  50.206  1.00 90.87
ATOM    356  N   ASN A  48     -15.152  22.285  50.059  1.00 48.17
ATOM    357  CA  ASN A  48     -16.290  23.066  50.491  1.00 48.03
ATOM    358  C   ASN A  48     -15.954  24.303  51.298  1.00 44.92
ATOM    359  O   ASN A  48     -16.641  24.644  52.272  1.00 40.67
ATOM    360  CB  ASN A  48     -17.289  22.225  51.310  1.00 44.29
ATOM    361  CG  ASN A  48     -18.688  22.771  51.105  1.00 86.53
ATOM    362  OD1 ASN A  48     -19.012  23.236  49.996  1.00 80.31
ATOM    363  ND2 ASN A  48     -19.495  22.754  52.167  1.00 79.87
ATOM    364  N   LEU A  49     -14.902  24.975  50.899  1.00 37.27
ATOM    365  CA  LEU A  49     -14.575  26.165  51.639  1.00 35.59
ATOM    366  C   LEU A  49     -15.499  27.253  51.115  1.00 40.36
ATOM    367  O   LEU A  49     -15.408  27.618  49.944  1.00 41.04
ATOM    368  CB  LEU A  49     -13.075  26.504  51.519  1.00 33.17
ATOM    369  CG  LEU A  49     -12.645  27.780  52.244  1.00 36.35
ATOM    370  CD1 LEU A  49     -12.842  27.583  53.737  1.00 34.98
ATOM    371  CD2 LEU A  49     -11.169  28.024  51.977  1.00 32.02
ATOM    372  N   ARG A  50     -16.402  27.745  51.966  1.00 38.16
ATOM    373  CA  ARG A  50     -17.343  28.785  51.541  1.00 40.98
ATOM    374  C   ARG A  50     -17.066  30.228  51.997  1.00 46.66
ATOM    375  O   ARG A  50     -17.541  31.214  51.410  1.00 38.00
ATOM    376  CB  ARG A  50     -18.744  28.339  51.902  1.00 46.12
ATOM    377  CG  ARG A  50     -19.238  27.266  50.932  1.00 61.10
ATOM    378  CD  ARG A  50     -20.306  26.345  51.511  1.00 75.76
ATOM    379  NE  ARG A  50     -20.745  25.322  50.554  1.00100.00
ATOM    380  CZ  ARG A  50     -21.979  24.809  50.451  1.00100.00
ATOM    381  NH1 ARG A  50     -22.981  25.195  51.240  1.00100.00
ATOM    382  NH2 ARG A  50     -22.220  23.875  49.527  1.00 84.13
ATOM    383  N   SER A  51     -16.271  30.339  53.066  1.00 50.16
ATOM    384  CA  SER A  51     -15.885  31.610  53.671  1.00 49.64
ATOM    385  C   SER A  51     -14.550  31.540  54.403  1.00 47.77
ATOM    386  O   SER A  51     -14.207  30.522  55.029  1.00 42.04
ATOM    387  CB  SER A  51     -16.925  32.073  54.697  1.00 53.65
ATOM    388  OG  SER A  51     -17.107  31.125  55.755  1.00 51.47
ATOM    389  N   LEU A  52     -13.829  32.663  54.351  1.00 41.55
ATOM    390  CA  LEU A  52     -12.575  32.757  55.087  1.00 40.56
ATOM    391  C   LEU A  52     -12.474  33.996  55.991  1.00 43.53
ATOM    392  O   LEU A  52     -13.288  34.921  55.895  1.00 39.84
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ATOM    393  CB  LEU A  52     -11.291  32.385  54.325  1.00 39.23
ATOM    394  CG  LEU A  52     -10.884  33.281  53.164  1.00 45.23
ATOM    395  CD1 LEU A  52     -11.692  32.934  51.927  1.00 47.83
ATOM    396  CD2 LEU A  52     -10.973  34.762  53.516  1.00 44.42
ATOM    397  N   VAL A  53     -11.489  34.013  56.899  1.00 37.60
ATOM    398  CA  VAL A  53     -11.289  35.157  57.773  1.00 32.60
ATOM    399  C   VAL A  53      -9.902  35.696  57.554  1.00 31.28
ATOM    400  O   VAL A  53      -8.942  34.925  57.414  1.00 26.57
ATOM    401  CB  VAL A  53     -11.527  34.916  59.258  1.00 34.90
ATOM    402  CG1 VAL A  53     -11.411  36.227  60.052  1.00 32.09
ATOM    403  CG2 VAL A  53     -12.904  34.310  59.444  1.00 34.64
ATOM    404  N   LEU A  54      -9.857  37.020  57.478  1.00 22.73
ATOM    405  CA  LEU A  54      -8.634  37.730  57.325  1.00 21.84
ATOM    406  C   LEU A  54      -8.434  38.607  58.562  1.00 30.12
ATOM    407  O   LEU A  54      -9.386  38.932  59.275  1.00 27.27
ATOM    408  CB  LEU A  54      -8.642  38.619  56.097  1.00 23.04
ATOM    409  CG  LEU A  54      -8.545  37.839  54.796  1.00 29.10
ATOM    410  CD1 LEU A  54      -8.495  38.869  53.678  1.00 26.16
ATOM    411  CD2 LEU A  54      -7.251  37.027  54.743  1.00 24.36
ATOM    412  N   ASP A  55      -7.175  38.970  58.810  1.00 27.32
ATOM    413  CA  ASP A  55      -6.807  39.843  59.910  1.00 24.82
ATOM    414  C   ASP A  55      -6.785  41.269  59.354  1.00 24.10
ATOM    415  O   ASP A  55      -6.404  41.485  58.196  1.00 20.86
ATOM    416  CB  ASP A  55      -5.390  39.545  60.475  1.00 23.73
ATOM    417  CG  ASP A  55      -5.197  38.294  61.291  1.00 16.69
ATOM    418  OD1 ASP A  55      -5.748  38.060  62.371  1.00 23.25
ATOM    419  OD2 ASP A  55      -4.279  37.499  60.737  1.00 20.96
ATOM    420  N   THR A  56      -7.203  42.241  60.199  1.00 24.09
ATOM    421  CA  THR A  56      -7.176  43.675  59.882  1.00 21.61
ATOM    422  C   THR A  56      -6.990  44.475  61.175  1.00 20.13
ATOM    423  O   THR A  56      -7.355  44.035  62.254  1.00 18.34
ATOM    424  CB  THR A  56      -8.477  44.244  59.263  1.00 21.22
ATOM    425  OG1 THR A  56      -9.507  44.197  60.246  1.00 22.90
ATOM    426  CG2 THR A  56      -8.831  43.494  57.987  1.00 21.74
ATOM    427  N   LYS A  57      -6.498  45.695  61.046  1.00 20.23
ATOM    428  CA  LYS A  57      -6.428  46.501  62.242  1.00 19.81
ATOM    429  C   LYS A  57      -6.591  47.937  61.799  1.00 21.15
ATOM    430  O   LYS A  57      -5.807  48.429  61.010  1.00 19.90
ATOM    431  CB  LYS A  57      -5.124  46.230  62.926  1.00 24.68
ATOM    432  CG  LYS A  57      -4.922  46.928  64.262  1.00 40.66
ATOM    433  CD  LYS A  57      -3.439  47.032  64.609  1.00 42.93
ATOM    434  CE  LYS A  57      -3.141  46.702  66.060  1.00 75.78
ATOM    435  NZ  LYS A  57      -1.894  47.316  66.567  1.00 94.53
ATOM    436  N   ASP A  58      -7.639  48.622  62.241  1.00 20.19
ATOM    437  CA  ASP A  58      -7.788  49.989  61.784  1.00 17.85
ATOM    438  C   ASP A  58      -7.836  50.124  60.283  1.00 24.95
ATOM    439  O   ASP A  58      -7.335  51.088  59.678  1.00 23.25
ATOM    440  CB  ASP A  58      -6.780  50.959  62.402  1.00 21.68
ATOM    441  CG  ASP A  58      -7.118  50.982  63.856  1.00 36.83
ATOM    442  OD1 ASP A  58      -8.253  51.136  64.263  1.00 40.21
ATOM    443  OD2 ASP A  58      -6.100  50.683  64.618  1.00 37.52
ATOM    444  N   LEU A  59      -8.466  49.121  59.698  1.00 26.52
ATOM    445  CA  LEU A  59      -8.615  49.130  58.259  1.00 29.86
ATOM    446  C   LEU A  59     -10.025  49.586  57.847  1.00 33.01
ATOM    447  O   LEU A  59     -11.070  49.255  58.424  1.00 29.32
ATOM    448  CB  LEU A  59      -8.196  47.789  57.588  1.00 29.02
ATOM    449  CG  LEU A  59      -6.682  47.520  57.589  1.00 29.22
ATOM    450  CD1 LEU A  59      -6.377  46.244  56.795  1.00 29.68
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ATOM 451 CD2 LEU A 59 -5.923 48.703 56.978 1.00 22.97
ATOM 452 N THR A 60 -10.029 50.399 56.819 1.00 36.77
ATOM 453 CA THR A 60 -11.279 50.877 56.254 1.00 42.01
ATOM 454 C THR A 60 -11.494 50.092 54.940 1.00 36.44
ATOM 455 O THR A 60 -10.694 50.247 53.992 1.00 33.67
ATOM 456 CB THR A 60 -11.220 52.424 56.080 1.00 56.43
ATOM 457 OG1 THR A 60 -11.614 53.107 57.261 1.00 52.66
ATOM 458 CG2 THR A 60 -12.034 52.910 54.893 1.00 60.41
ATOM 459 N ILE A 61 -12.515 49.227 54.909 1.00 29.81
ATOM 460 CA ILE A 61 -12.779 48.432 53.711 1.00 32.79
ATOM 461 C ILE A 61 -13.799 49.068 52.780 1.00 35.88
ATOM 462 O ILE A 61 -14.939 49.202 53.176 1.00 30.98
ATOM 463 CB ILE A 61 -13.337 47.038 53.972 1.00 37.74
ATOM 464 CG1 ILE A 61 -12.616 46.331 55.118 1.00 40.37
ATOM 465 CG2 ILE A 61 -13.264 46.240 52.661 1.00 36.33
ATOM 466 CD1 ILE A 61 -11.098 46.353 54.952 1.00 49.83
ATOM 467 N GLU A 62 -13.396 49.409 51.562 1.00 40.08
ATOM 468 CA GLU A 62 -14.276 49.995 50.553 1.00 43.04
ATOM 469 C GLU A 62 -15.199 48.885 50.016 1.00 45.27
ATOM 470 O GLU A 62 -16.415 48.853 50.243 1.00 45.18
ATOM 471 CB GLU A 62 -13.392 50.640 49.457 1.00 45.63
ATOM 472 CG GLU A 62 -14.131 51.580 48.471 1.00 73.11
ATOM 473 CD GLU A 62 -14.846 50.895 47.320 1.00100.00
ATOM 474 OE1 GLU A 62 -15.037 49.689 47.286 1.00100.00
ATOM 475 OE2 GLU A 62 -15.254 51.717 46.368 1.00100.00
ATOM 476 N LYS A 63 -14.588 47.918 49.336 1.00 38.38
ATOM 477 CA LYS A 63 -15.311 46.761 48.838 1.00 37.37
ATOM 478 C LYS A 63 -14.396 45.541 48.702 1.00 38.22
ATOM 479 O LYS A 63 -13.167 45.646 48.717 1.00 32.45
ATOM 480 CB LYS A 63 -16.022 47.038 47.530 1.00 33.09
ATOM 481 CG LYS A 63 -15.051 47.059 46.366 1.00 27.59
ATOM 482 CD LYS A 63 -15.548 47.905 45.207 1.00 37.24
ATOM 483 CE LYS A 63 -14.443 48.583 44.423 1.00 43.28
ATOM 484 NZ LYS A 63 -14.395 48.151 43.015 1.00 76.13
ATOM 485 N VAL A 64 -15.049 44.395 48.574 1.00 43.49
ATOM 486 CA VAL A 64 -14.436 43.081 48.377 1.00 45.64
ATOM 487 C VAL A 64 -14.934 42.410 47.087 1.00 45.26
ATOM 488 O VAL A 64 -16.058 41.916 46.997 1.00 39.88
ATOM 489 CB VAL A 64 -14.689 42.140 49.543 1.00 48.77
ATOM 490 CG1 VAL A 64 -14.270 40.746 49.101 1.00 48.87
ATOM 491 CG2 VAL A 64 -13.861 42.572 50.742 1.00 47.38
ATOM 492 N VAL A 65 -14.096 42.380 46.077 1.00 39.08
ATOM 493 CA VAL A 65 -14.534 41.789 44.840 1.00 40.48
ATOM 494 C VAL A 65 -13.908 40.457 44.527 1.00 37.21
ATOM 495 O VAL A 65 -12.717 40.294 44.730 1.00 33.83
ATOM 496 CB VAL A 65 -14.162 42.709 43.687 1.00 48.88
ATOM 497 CG1 VAL A 65 -14.416 42.025 42.352 1.00 47.68
ATOM 498 CG2 VAL A 65 -14.946 44.014 43.767 1.00 51.54
ATOM 499 N ILE A 66 -14.733 39.568 43.977 1.00 32.25
ATOM 500 CA ILE A 66 -14.361 38.256 43.496 1.00 32.04
ATOM 501 C ILE A 66 -15.071 37.989 42.163 1.00 44.56
ATOM 502 O ILE A 66 -16.316 38.027 42.049 1.00 42.61
ATOM 503 CB ILE A 66 -14.649 37.095 44.429 1.00 35.68
ATOM 504 CG1 ILE A 66 -14.193 37.374 45.860 1.00 35.96
ATOM 505 CG2 ILE A 66 -13.875 35.912 43.866 1.00 35.65
ATOM 506 CD1 ILE A 66 -14.692 36.339 46.860 1.00 26.89
ATOM 507 N ASN A 67 -14.261 37.702 41.147 1.00 46.77
ATOM 508 CA ASN A 67 -14.764 37.413 39.801 1.00 48.02

ATOM 509 C ASN A 67 -15.601 38.568 39.297 1.00 51.70
ATOM 510 O ASN A 67 -16.753 38.371 38.923 1.00 51.19
ATOM 511 CB ASN A 67 -15.580 36.098 39.695 1.00 32.37
ATOM 512 CG ASN A 67 -14.756 34.862 40.037 1.00 57.02
ATOM 513 OD1 ASN A 67 -13.549 34.796 39.721 1.00 42.45
ATOM 514 ND2 ASN A 67 -15.389 33.889 40.714 1.00 45.38
ATOM 515 N GLY A 68 -15.000 39.757 39.327 1.00 45.47
ATOM 516 CA GLY A 68 -15.638 40.982 38.876 1.00 44.33
ATOM 517 C GLY A 68 -16.870 41.394 39.669 1.00 52.05
ATOM 518 O GLY A 68 -17.456 42.442 39.422 1.00 60.14
ATOM 519 N GLN A 69 -17.280 40.591 40.630 1.00 45.36
ATOM 520 CA GLN A 69 -18.458 40.930 41.403 1.00 46.40
ATOM 521 C GLN A 69 -18.156 41.109 42.894 1.00 57.29
ATOM 522 O GLN A 69 -17.404 40.355 43.525 1.00 55.55
ATOM 523 CB GLN A 69 -19.575 39.858 41.258 1.00 48.27
ATOM 524 CG GLN A 69 -20.184 39.636 39.841 1.00 33.05
ATOM 525 CD GLN A 69 -20.435 40.926 39.098 1.00 73.86
ATOM 526 OE1 GLN A 69 -19.771 41.195 38.074 1.00 70.10
ATOM 527 NE2 GLN A 69 -21.364 41.729 39.634 1.00 75.78
ATOM 528 N GLU A 70 -18.800 42.114 43.469 1.00 54.73
ATOM 529 CA GLU A 70 -18.661 42.408 44.879 1.00 53.61
ATOM 530 C GLU A 70 -19.274 41.297 45.728 1.00 54.45
ATOM 531 O GLU A 70 -20.285 40.708 45.342 1.00 56.71
ATOM 532 CB GLU A 70 -19.244 43.794 45.191 1.00 54.16
ATOM 533 CG GLU A 70 -18.670 44.845 44.223 1.00 66.60
ATOM 534 CD GLU A 70 -19.042 46.248 44.614 1.00 99.90
ATOM 535 OE1 GLU A 70 -19.763 46.518 45.567 1.00 55.96
ATOM 536 OE2 GLU A 70 -18.515 47.139 43.807 1.00100.00
ATOM 537 N VAL A 71 -18.652 40.992 46.875 1.00 41.84
ATOM 538 CA VAL A 71 -19.146 39.929 47.731 1.00 37.89
ATOM 539 C VAL A 71 -19.472 40.373 49.160 1.00 37.87
ATOM 540 O VAL A 71 -19.112 41.469 49.586 1.00 34.22
ATOM 541 CB VAL A 71 -18.254 38.677 47.618 1.00 41.06
ATOM 542 CG1 VAL A 71 -17.823 38.468 46.158 1.00 38.37
ATOM 543 CG2 VAL A 71 -17.012 38.800 48.500 1.00 39.32
ATOM 544 N LYS A 72 -20.182 39.513 49.897 1.00 35.47
ATOM 545 CA LYS A 72 -20.559 39.775 51.274 1.00 36.55
ATOM 546 C LYS A 72 -19.325 39.664 52.171 1.00 48.55
ATOM 547 O LYS A 72 -18.411 38.849 51.947 1.00 44.75
ATOM 548 CB LYS A 72 -21.607 38.799 51.783 1.00 36.22
ATOM 549 CG LYS A 72 -22.618 39.411 52.729 1.00 71.24
ATOM 550 CD LYS A 72 -23.875 39.881 52.015 1.00 91.55
ATOM 551 CE LYS A 72 -25.018 40.175 52.979 1.00100.00
ATOM 552 NZ LYS A 72 -25.393 39.021 53.821 1.00100.00
ATOM 553 N TYR A 73 -19.327 40.506 53.199 1.00 46.72
ATOM 554 CA TYR A 73 -18.263 40.517 54.177 1.00 46.48
ATOM 555 C TYR A 73 -18.637 41.190 55.466 1.00 47.06
ATOM 556 O TYR A 73 -19.583 41.962 55.569 1.00 46.31
ATOM 557 CB TYR A 73 -16.956 41.091 53.662 1.00 43.25
ATOM 558 CG TYR A 73 -16.940 42.580 53.611 1.00 47.55
ATOM 559 CD1 TYR A 73 -16.675 43.327 54.752 1.00 49.47
ATOM 560 CD2 TYR A 73 -17.111 43.242 52.396 1.00 49.40
ATOM 561 CE1 TYR A 73 -16.632 44.722 54.702 1.00 45.81
ATOM 562 CE2 TYR A 73 -17.031 44.632 52.315 1.00 50.44
ATOM 563 CZ TYR A 73 -16.821 45.357 53.475 1.00 55.67
ATOM 564 OH TYR A 73 -16.761 46.722 53.409 1.00 61.06
ATOM 565 N ALA A 74 -17.852 40.860 56.462 1.00 41.61
ATOM 566 CA ALA A 74 -18.079 41.415 57.772 1.00 41.55

ATOM	567	C	ALA	A	74	-16.763	41.674	58.524	1.00	45.67
ATOM	568	O	ALA	A	74	-15.710	41.092	58.249	1.00	38.74
ATOM	569	CB	ALA	A	74	-19.074	40.572	58.563	1.00	39.69
ATOM	570	N	LEU	A	75	-16.861	42.609	59.464	1.00	43.41
ATOM	571	CA	LEU	A	75	-15.798	43.026	60.355	1.00	38.66
ATOM	572	C	LEU	A	75	-16.241	42.750	61.778	1.00	34.64
ATOM	573	O	LEU	A	75	-17.202	43.316	62.260	1.00	39.67
ATOM	574	CB	LEU	A	75	-15.432	44.499	60.117	1.00	38.89
ATOM	575	CG	LEU	A	75	-14.504	44.657	58.913	1.00	47.18
ATOM	576	CD1	LEU	A	75	-14.025	46.099	58.824	1.00	51.19
ATOM	577	CD2	LEU	A	75	-13.278	43.760	59.032	1.00	48.20
ATOM	578	N	GLY	A	76	-15.616	41.817	62.458	1.00	33.98
ATOM	579	CA	GLY	A	76	-16.005	41.518	63.823	1.00	34.06
ATOM	580	C	GLY	A	76	-15.526	42.623	64.766	1.00	38.57
ATOM	581	O	GLY	A	76	-14.887	43.617	64.372	1.00	36.37
ATOM	582	N	GLU	A	77	-15.857	42.491	66.037	1.00	38.70
ATOM	583	CA	GLU	A	77	-15.395	43.560	66.900	1.00	41.69
ATOM	584	C	GLU	A	77	-13.907	43.415	67.146	1.00	41.16
ATOM	585	O	GLU	A	77	-13.371	42.308	67.121	1.00	33.89
ATOM	586	CB	GLU	A	77	-16.152	43.651	68.238	1.00	44.95
ATOM	587	CG	GLU	A	77	-16.634	42.290	68.792	1.00	66.34
ATOM	588	CD	GLU	A	77	-16.713	42.271	70.307	1.00	100.00
ATOM	589	OE1	GLU	A	77	-16.003	41.551	71.002	1.00	100.00
ATOM	590	OE2	GLU	A	77	-17.607	43.109	70.802	1.00	100.00
ATOM	591	N	ARG	A	78	-13.266	44.551	67.393	1.00	42.48
ATOM	592	CA	ARG	A	78	-11.843	44.608	67.681	1.00	40.23
ATOM	593	C	ARG	A	78	-11.440	43.802	68.895	1.00	38.54
ATOM	594	O	ARG	A	78	-12.137	43.783	69.908	1.00	33.87
ATOM	595	CB	ARG	A	78	-11.360	46.010	67.939	1.00	39.17
ATOM	596	CG	ARG	A	78	-9.927	46.212	67.462	1.00	46.74
ATOM	597	CD	ARG	A	78	-9.391	47.489	68.064	1.00	34.80
ATOM	598	NE	ARG	A	78	-7.960	47.579	68.004	1.00	30.05
ATOM	599	CZ	ARG	A	78	-7.466	48.544	67.282	1.00	56.07
ATOM	600	NH1	ARG	A	78	-8.293	49.370	66.631	1.00	53.51
ATOM	601	NH2	ARG	A	78	-6.144	48.657	67.205	1.00	33.42
ATOM	602	N	GLN	A	79	-10.293	43.133	68.761	1.00	31.91
ATOM	603	CA	GLN	A	79	-9.743	42.334	69.829	1.00	30.53
ATOM	604	C	GLN	A	79	-8.425	42.981	70.197	1.00	34.86
ATOM	605	O	GLN	A	79	-7.340	42.497	69.903	1.00	33.78
ATOM	606	CB	GLN	A	79	-9.602	40.868	69.400	1.00	31.15
ATOM	607	CG	GLN	A	79	-10.980	40.241	69.104	1.00	35.70
ATOM	608	CD	GLN	A	79	-10.937	38.731	69.083	1.00	41.57
ATOM	609	OE1	GLN	A	79	-10.137	38.088	69.795	1.00	41.83
ATOM	610	NE2	GLN	A	79	-11.802	38.159	68.255	1.00	37.26
ATOM	611	N	SER	A	80	-8.566	44.149	70.795	1.00	28.82
ATOM	612	CA	SER	A	80	-7.443	44.951	71.184	1.00	25.23
ATOM	613	C	SER	A	80	-6.326	44.914	70.197	1.00	23.44
ATOM	614	O	SER	A	80	-6.479	45.361	69.076	1.00	26.59
ATOM	615	CB	SER	A	80	-6.889	44.746	72.585	1.00	31.25
ATOM	616	OG	SER	A	80	-6.560	43.393	72.744	1.00	36.44
ATOM	617	N	TYR	A	81	-5.174	44.420	70.668	1.00	20.57
ATOM	618	CA	TYR	A	81	-3.968	44.448	69.861	1.00	19.31
ATOM	619	C	TYR	A	81	-3.981	43.578	68.648	1.00	19.50
ATOM	620	O	TYR	A	81	-3.087	43.722	67.841	1.00	24.41
ATOM	621	CB	TYR	A	81	-2.638	44.225	70.624	1.00	20.60
ATOM	622	CG	TYR	A	81	-2.615	42.834	71.192	1.00	16.49
ATOM	623	CD1	TYR	A	81	-3.209	42.581	72.424	1.00	17.66
ATOM	624	CD2	TYR	A	81	-2.085	41.783	70.452	1.00	17.05

ATOM	625	CE1	TYR	A	81	-3.258	41.294	72.944	1.00	20.70
ATOM	626	CE2	TYR	A	81	-2.178	40.481	70.933	1.00	18.17
ATOM	627	CZ	TYR	A	81	-2.731	40.249	72.192	1.00	21.91
ATOM	628	OH	TYR	A	81	-2.804	38.975	72.700	1.00	23.17
ATOM	629	N	LYS	A	82	-4.932	42.678	68.560	1.00	15.16
ATOM	630	CA	LYS	A	82	-5.023	41.797	67.414	1.00	16.93
ATOM	631	C	LYS	A	82	-5.794	42.437	66.270	1.00	29.18
ATOM	632	O	LYS	A	82	-5.780	41.883	65.177	1.00	28.33
ATOM	633	CB	LYS	A	82	-5.620	40.450	67.767	1.00	16.35
ATOM	634	CG	LYS	A	82	-5.110	39.966	69.106	1.00	32.81
ATOM	635	CD	LYS	A	82	-5.245	38.472	69.330	1.00	28.25
ATOM	636	CE	LYS	A	82	-5.699	38.100	70.734	1.00	39.59
ATOM	637	NZ	LYS	A	82	-6.304	36.762	70.827	1.00	41.62
ATOM	638	N	GLY	A	83	-6.437	43.596	66.510	1.00	24.43
ATOM	639	CA	GLY	A	83	-7.209	44.249	65.467	1.00	21.14
ATOM	640	C	GLY	A	83	-8.579	43.564	65.361	1.00	27.80
ATOM	641	O	GLY	A	83	-9.037	42.901	66.295	1.00	23.50
ATOM	642	N	SER	A	84	-9.218	43.674	64.186	1.00	28.99
ATOM	643	CA	SER	A	84	-10.541	43.072	63.948	1.00	27.81
ATOM	644	C	SER	A	84	-10.601	42.083	62.770	1.00	28.89
ATOM	645	O	SER	A	84	-10.153	42.340	61.646	1.00	27.83
ATOM	646	CB	SER	A	84	-11.619	44.136	63.732	1.00	30.17
ATOM	647	OG	SER	A	84	-11.229	45.402	64.258	1.00	40.66
ATOM	648	N	PRO	A	85	-11.210	40.949	63.053	1.00	22.21
ATOM	649	CA	PRO	A	85	-11.380	39.868	62.087	1.00	23.63
ATOM	650	C	PRO	A	85	-12.323	40.261	60.970	1.00	34.83
ATOM	651	O	PRO	A	85	-13.428	40.734	61.227	1.00	32.98
ATOM	652	CB	PRO	A	85	-12.094	38.750	62.838	1.00	20.66
ATOM	653	CG	PRO	A	85	-12.728	39.406	64.064	1.00	26.90
ATOM	654	CD	PRO	A	85	-12.026	40.748	64.281	1.00	19.24
ATOM	655	N	MET	A	86	-11.873	40.007	59.748	1.00	32.85
ATOM	656	CA	MET	A	86	-12.657	40.277	58.567	1.00	27.57
ATOM	657	C	MET	A	86	-13.107	38.999	57.876	1.00	35.20
ATOM	658	O	MET	A	86	-12.324	38.287	57.254	1.00	32.03
ATOM	659	CB	MET	A	86	-11.867	41.111	57.587	1.00	25.81
ATOM	660	CG	MET	A	86	-12.681	41.288	56.336	1.00	27.23
ATOM	661	SD	MET	A	86	-11.733	42.327	55.236	1.00	34.75
ATOM	662	CE	MET	A	86	-12.733	42.250	53.731	1.00	34.07
ATOM	663	N	GLU	A	87	-14.383	38.690	58.005	1.00	37.91
ATOM	664	CA	GLU	A	87	-14.920	37.509	57.352	1.00	37.56
ATOM	665	C	GLU	A	87	-15.419	37.749	55.916	1.00	38.67
ATOM	666	O	GLU	A	87	-16.161	38.678	55.590	1.00	35.07
ATOM	667	CB	GLU	A	87	-15.916	36.790	58.244	1.00	37.42
ATOM	668	CG	GLU	A	87	-16.428	35.494	57.598	1.00	42.93
ATOM	669	CD	GLU	A	87	-17.485	34.869	58.463	1.00	98.12
ATOM	670	OE1	GLU	A	87	-18.518	35.442	58.765	1.00	100.00
ATOM	671	OE2	GLU	A	87	-17.169	33.668	58.884	1.00	97.75
ATOM	672	N	ILE	A	88	-14.951	36.912	55.008	1.00	35.85
ATOM	673	CA	ILE	A	88	-15.335	37.017	53.619	1.00	34.90
ATOM	674	C	ILE	A	88	-16.128	35.804	53.112	1.00	43.97
ATOM	675	O	ILE	A	88	-15.841	34.637	53.416	1.00	40.77
ATOM	676	CB	ILE	A	88	-14.186	37.383	52.728	1.00	36.05
ATOM	677	CG1	ILE	A	88	-13.523	38.648	53.250	1.00	33.06
ATOM	678	CG2	ILE	A	88	-14.681	37.567	51.297	1.00	40.76
ATOM	679	CD1	ILE	A	88	-12.247	38.964	52.466	1.00	23.51
ATOM	680	N	SER	A	89	-17.184	36.123	52.360	1.00	44.09
ATOM	681	CA	SER	A	89	-18.102	35.143	51.786	1.00	45.80
ATOM	682	C	SER	A	89	-17.731	34.761	50.373	1.00	45.34

ATOM 683 O SER A 89 -17.690 35.614 49.475 1.00 42.76
ATOM 684 CB SER A 89 -19.556 35.586 51.839 1.00 50.73
ATOM 685 OG SER A 89 -19.993 35.504 53.187 1.00 74.19
ATOM 686 N LEU A 90 -17.458 33.462 50.220 1.00 40.59
ATOM 687 CA LEU A 90 -17.093 32.938 48.923 1.00 42.06
ATOM 688 C LEU A 90 -18.339 32.535 48.139 1.00 46.06
ATOM 689 O LEU A 90 -19.189 31.774 48.630 1.00 45.88
ATOM 690 CB LEU A 90 -16.141 31.743 49.082 1.00 42.14
ATOM 691 CG LEU A 90 -15.105 31.978 50.161 1.00 45.92
ATOM 692 CD1 LEU A 90 -14.261 30.708 50.278 1.00 47.05
ATOM 693 CD2 LEU A 90 -14.260 33.174 49.738 1.00 48.82
ATOM 694 N PRO A 91 -18.430 33.064 46.926 1.00 45.82
ATOM 695 CA PRO A 91 -19.562 32.786 46.048 1.00 49.29
ATOM 696 C PRO A 91 -19.576 31.355 45.482 1.00 56.99
ATOM 697 O PRO A 91 -20.552 30.965 44.859 1.00 55.61
ATOM 698 CB PRO A 91 -19.453 33.799 44.909 1.00 49.61
ATOM 699 CG PRO A 91 -18.042 34.369 44.955 1.00 53.03
ATOM 700 CD PRO A 91 -17.382 33.839 46.221 1.00 46.47
ATOM 701 N ILE A 92 -18.506 30.582 45.696 1.00 55.26
ATOM 702 CA ILE A 92 -18.422 29.211 45.223 1.00 58.60
ATOM 703 C ILE A 92 -17.760 28.334 46.273 1.00 58.73
ATOM 704 O ILE A 92 -16.685 28.673 46.724 1.00 61.40
ATOM 705 CB ILE A 92 -17.621 29.101 43.927 1.00 64.96
ATOM 706 CG1 ILE A 92 -18.422 29.655 42.750 1.00 68.88
ATOM 707 CG2 ILE A 92 -17.258 27.642 43.666 1.00 65.48
ATOM 708 CD1 ILE A 92 -17.579 30.091 41.549 1.00 81.60
ATOM 709 N ALA A 93 -18.335 27.210 46.673 1.00 47.92
ATOM 710 CA ALA A 93 -17.613 26.441 47.657 1.00 44.97
ATOM 711 C ALA A 93 -16.291 26.029 47.044 1.00 53.08
ATOM 712 O ALA A 93 -16.279 25.772 45.841 1.00 54.26
ATOM 713 CB ALA A 93 -18.384 25.220 48.121 1.00 44.53
ATOM 714 N LEU A 94 -15.199 25.994 47.827 1.00 46.91
ATOM 715 CA LEU A 94 -13.894 25.607 47.304 1.00 43.41
ATOM 716 C LEU A 94 -13.570 24.240 47.797 1.00 46.24
ATOM 717 O LEU A 94 -14.042 23.826 48.851 1.00 47.66
ATOM 718 CB LEU A 94 -12.715 26.455 47.800 1.00 42.71
ATOM 719 CG LEU A 94 -12.601 27.799 47.109 1.00 48.37
ATOM 720 CD1 LEU A 94 -11.307 28.510 47.507 1.00 45.33
ATOM 721 CD2 LEU A 94 -12.659 27.584 45.600 1.00 57.15
ATOM 722 N SER A 95 -12.744 23.561 47.039 1.00 43.22
ATOM 723 CA SER A 95 -12.335 22.250 47.476 1.00 42.38
ATOM 724 C SER A 95 -10.834 22.238 47.628 1.00 36.34
ATOM 725 O SER A 95 -10.131 23.166 47.218 1.00 34.42
ATOM 726 CB SER A 95 -12.896 21.096 46.670 1.00 48.01
ATOM 727 OG SER A 95 -14.209 20.867 47.143 1.00 64.55
ATOM 728 N LYS A 96 -10.334 21.200 48.239 1.00 32.05
ATOM 729 CA LYS A 96 -8.899 21.179 48.443 1.00 31.11
ATOM 730 C LYS A 96 -8.126 21.687 47.252 1.00 32.56
ATOM 731 O LYS A 96 -8.513 21.469 46.127 1.00 39.67
ATOM 732 CB LYS A 96 -8.395 19.815 48.908 1.00 35.42
ATOM 733 CG LYS A 96 -9.282 19.215 49.993 1.00 75.37
ATOM 734 CD LYS A 96 -8.738 17.938 50.628 1.00 90.56
ATOM 735 CE LYS A 96 -9.552 17.461 51.829 1.00100.00
ATOM 736 NZ LYS A 96 -8.830 16.537 52.728 1.00100.00
ATOM 737 N ASN A 97 -7.023 22.370 47.483 1.00 24.18
ATOM 738 CA ASN A 97 -6.125 22.870 46.446 1.00 23.26
ATOM 739 C ASN A 97 -6.635 23.805 45.396 1.00 28.02
ATOM 740 O ASN A 97 -5.916 24.197 44.481 1.00 32.95

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ATOM    741  CB  ASN A  97      -5.257  21.772  45.817  1.00 29.05
ATOM    742  CG  ASN A  97      -4.511  21.024  46.903  1.00 79.22
ATOM    743  OD1 ASN A  97      -3.813  21.645  47.725  1.00 66.27
ATOM    744  ND2 ASN A  97      -4.690  19.700  46.926  1.00 89.90
ATOM    745  N   GLN A  98      -7.876  24.148  45.539  1.00 29.12
ATOM    746  CA  GLN A  98      -8.480  25.068  44.628  1.00 30.69
ATOM    747  C   GLN A  98      -8.245  26.455  45.151  1.00 34.12
ATOM    748  O   GLN A  98      -8.220  26.673  46.363  1.00 32.27
ATOM    749  CB  GLN A  98      -9.979  24.775  44.680  1.00 35.86
ATOM    750  CG  GLN A  98     -10.299  23.404  44.057  1.00 52.64
ATOM    751  CD  GLN A  98     -11.618  23.476  43.326  1.00 90.95
ATOM    752  OE1 GLN A  98     -12.506  22.646  43.569  1.00 86.29
ATOM    753  NE2 GLN A  98     -11.761  24.502  42.477  1.00 83.23
ATOM    754  N   GLU A  99      -8.113  27.366  44.212  1.00 34.57
ATOM    755  CA  GLU A  99      -7.836  28.767  44.459  1.00 35.24
ATOM    756  C   GLU A  99      -8.799  29.788  43.877  1.00 42.30
ATOM    757  O   GLU A  99      -9.240  29.696  42.731  1.00 42.60
ATOM    758  CB  GLU A  99      -6.487  29.092  43.786  1.00 35.30
ATOM    759  CG  GLU A  99      -5.592  27.856  43.665  1.00 43.60
ATOM    760  CD  GLU A  99      -4.164  28.161  43.336  1.00 52.48
ATOM    761  OE1 GLU A  99      -3.778  29.191  42.812  1.00 54.31
ATOM    762  OE2 GLU A  99      -3.377  27.171  43.663  1.00 81.49
ATOM    763  N   ILE A 100      -9.036  30.820  44.680  1.00 38.20
ATOM    764  CA  ILE A 100      -9.820  31.975  44.306  1.00 37.64
ATOM    765  C   ILE A 100      -8.939  33.193  44.501  1.00 47.53
ATOM    766  O   ILE A 100      -7.889  33.202  45.153  1.00 46.12
ATOM    767  CB  ILE A 100     -11.101  32.274  45.077  1.00 41.53
ATOM    768  CG1 ILE A 100     -11.070  31.895  46.542  1.00 44.24
ATOM    769  CG2 ILE A 100     -12.407  31.918  44.383  1.00 43.12
ATOM    770  CD1 ILE A 100     -10.379  32.958  47.391  1.00 63.56
ATOM    771  N   VAL A 101      -9.398  34.268  43.917  1.00 44.45
ATOM    772  CA  VAL A 101      -8.706  35.510  44.086  1.00 41.52
ATOM    773  C   VAL A 101      -9.710  36.529  44.565  1.00 44.93
ATOM    774  O   VAL A 101     -10.794  36.664  44.001  1.00 43.66
ATOM    775  CB  VAL A 101      -7.707  35.976  43.051  1.00 39.34
ATOM    776  CG1 VAL A 101      -7.825  35.219  41.749  1.00 38.49
ATOM    777  CG2 VAL A 101      -7.829  37.479  42.892  1.00 37.47
ATOM    778  N   ILE A 102      -9.338  37.145  45.681  1.00 36.04
ATOM    779  CA  ILE A 102     -10.137  38.122  46.378  1.00 30.61
ATOM    780  C   ILE A 102      -9.440  39.463  46.313  1.00 33.94
ATOM    781  O   ILE A 102      -8.294  39.614  46.776  1.00 33.48
ATOM    782  CB  ILE A 102     -10.260  37.610  47.798  1.00 32.63
ATOM    783  CG1 ILE A 102     -10.394  36.098  47.737  1.00 27.27
ATOM    784  CG2 ILE A 102     -11.463  38.204  48.502  1.00 37.40
ATOM    785  CD1 ILE A 102     -10.628  35.451  49.093  1.00 28.19
ATOM    786  N   GLU A 103     -10.116  40.423  45.676  1.00 26.53
ATOM    787  CA  GLU A 103      -9.549  41.755  45.548  1.00 27.13
ATOM    788  C   GLU A 103     -10.186  42.615  46.601  1.00 37.89
ATOM    789  O   GLU A 103     -11.408  42.630  46.710  1.00 40.69
ATOM    790  CB  GLU A 103      -9.731  42.362  44.169  1.00 28.43
ATOM    791  CG  GLU A 103      -8.946  43.670  44.000  1.00 39.11
ATOM    792  CD  GLU A 103      -9.263  44.343  42.690  1.00 94.53
ATOM    793  OE1 GLU A 103     -10.236  45.069  42.526  1.00100.00
ATOM    794  OE2 GLU A 103      -8.388  44.051  41.750  1.00 98.87
ATOM    795  N   ILE A 104      -9.355  43.252  47.416  1.00 36.94
ATOM    796  CA  ILE A 104      -9.847  44.076  48.512  1.00 35.20
ATOM    797  C   ILE A 104      -9.459  45.532  48.378  1.00 38.03
ATOM    798  O   ILE A 104      -8.277  45.856  48.192  1.00 34.77
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ATOM    799  CB  ILE A 104      -9.504  43.541  49.891  1.00 38.11
ATOM    800  CG1 ILE A 104     -10.003  42.125  50.061  1.00 34.81
ATOM    801  CG2 ILE A 104     -10.128  44.420  50.967  1.00 39.18
ATOM    802  CD1 ILE A 104      -9.015  41.335  50.896  1.00 30.92
ATOM    803  N   SER A 105     -10.529  46.353  48.429  1.00 42.46
ATOM    804  CA  SER A 105     -10.510  47.811  48.323  1.00 42.36
ATOM    805  C   SER A 105     -10.400  48.380  49.723  1.00 34.84
ATOM    806  O   SER A 105     -11.328  48.305  50.510  1.00 31.47
ATOM    807  CB  SER A 105     -11.731  48.328  47.575  1.00 45.94
ATOM    808  OG  SER A 105     -11.386  48.517  46.209  1.00 47.45
ATOM    809  N   PHE A 106      -9.228  48.910  50.031  1.00 33.13
ATOM    810  CA  PHE A 106      -8.995  49.380  51.385  1.00 29.35
ATOM    811  C   PHE A 106      -8.269  50.713  51.494  1.00 28.86
ATOM    812  O   PHE A 106      -7.550  51.199  50.577  1.00 24.93
ATOM    813  CB  PHE A 106      -8.134  48.290  52.115  1.00 27.98
ATOM    814  CG  PHE A 106      -6.700  48.251  51.597  1.00 27.57
ATOM    815  CD1 PHE A 106      -6.326  47.411  50.550  1.00 30.25
ATOM    816  CD2 PHE A 106      -5.709  49.085  52.123  1.00 31.01
ATOM    817  CE1 PHE A 106      -5.020  47.429  50.058  1.00 33.05
ATOM    818  CE2 PHE A 106      -4.401  49.136  51.641  1.00 30.90
ATOM    819  CZ  PHE A 106      -4.058  48.291  50.588  1.00 30.89
ATOM    820  N   GLU A 107      -8.472  51.231  52.717  1.00 31.09
ATOM    821  CA  GLU A 107      -7.864  52.476  53.183  1.00 36.36
ATOM    822  C   GLU A 107      -7.271  52.257  54.583  1.00 33.60
ATOM    823  O   GLU A 107      -7.945  51.706  55.468  1.00 34.10
ATOM    824  CB  GLU A 107      -8.918  53.613  53.297  1.00 40.08
ATOM    825  CG  GLU A 107      -8.512  55.003  52.740  1.00 64.89
ATOM    826  CD  GLU A 107      -9.717  55.892  52.518  1.00100.00
ATOM    827  OE1 GLU A 107     -10.367  55.977  51.476  1.00100.00
ATOM    828  OE2 GLU A 107     -10.011  56.578  53.592  1.00 86.39
ATOM    829  N   THR A 108      -6.019  52.681  54.788  1.00 32.30
ATOM    830  CA  THR A 108      -5.408  52.538  56.114  1.00 35.58
ATOM    831  C   THR A 108      -5.733  53.774  56.938  1.00 41.15
ATOM    832  O   THR A 108      -6.045  54.814  56.360  1.00 39.58
ATOM    833  CB  THR A 108      -3.864  52.454  56.088  1.00 36.81
ATOM    834  OG1 THR A 108      -3.268  53.544  55.381  1.00 33.05
ATOM    835  CG2 THR A 108      -3.418  51.100  55.560  1.00 27.41
ATOM    836  N   SER A 109      -5.608  53.647  58.258  1.00 34.04
ATOM    837  CA  SER A 109      -5.823  54.723  59.207  1.00 27.85
ATOM    838  C   SER A 109      -4.559  55.540  59.361  1.00 33.11
ATOM    839  O   SER A 109      -3.447  55.011  59.228  1.00 29.81
ATOM    840  CB  SER A 109      -6.278  54.179  60.541  1.00 26.33
ATOM    841  OG  SER A 109      -6.058  55.183  61.512  1.00 36.95
ATOM    842  N   PRO A 110      -4.671  56.854  59.614  1.00 33.05
ATOM    843  CA  PRO A 110      -3.403  57.541  59.715  1.00 31.04
ATOM    844  C   PRO A 110      -2.685  57.099  60.978  1.00 31.17
ATOM    845  O   PRO A 110      -1.461  57.191  61.092  1.00 32.61
ATOM    846  CB  PRO A 110      -3.586  59.039  59.464  1.00 32.40
ATOM    847  CG  PRO A 110      -5.026  59.160  58.980  1.00 34.90
ATOM    848  CD  PRO A 110      -5.736  57.884  59.448  1.00 32.97
ATOM    849  N   LYS A 111      -3.467  56.512  61.870  1.00 20.99
ATOM    850  CA  LYS A 111      -2.943  55.961  63.112  1.00 22.35
ATOM    851  C   LYS A 111      -2.509  54.489  63.004  1.00 26.37
ATOM    852  O   LYS A 111      -2.436  53.796  64.033  1.00 25.46
ATOM    853  CB  LYS A 111      -3.928  56.106  64.272  1.00 26.02
ATOM    854  CG  LYS A 111      -4.211  57.544  64.706  1.00 69.25
ATOM    855  CD  LYS A 111      -5.508  58.112  64.136  1.00 98.06
ATOM    856  CE  LYS A 111      -6.573  58.381  65.191  1.00100.00
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ATOM 857 NZ LYS A 111 -7.898 58.618 64.591 1.00100.00
ATOM 858 N SER A 112 -2.237 54.000 61.775 1.00 25.30
ATOM 859 CA SER A 112 -1.816 52.609 61.553 1.00 22.00
ATOM 860 C SER A 112 -0.545 52.268 62.367 1.00 19.89
ATOM 861 O SER A 112 0.496 52.894 62.223 1.00 23.91
ATOM 862 CB SER A 112 -1.541 52.354 60.072 1.00 15.83
ATOM 863 OG SER A 112 -0.793 51.153 59.917 1.00 19.70
ATOM 864 N SER A 113 -0.613 51.245 63.195 1.00 18.58
ATOM 865 CA SER A 113 0.525 50.842 64.006 1.00 18.61
ATOM 866 C SER A 113 1.734 50.356 63.211 1.00 24.91
ATOM 867 O SER A 113 2.859 50.239 63.718 1.00 22.90
ATOM 868 CB SER A 113 0.114 49.900 65.120 1.00 19.15
ATOM 869 OG SER A 113 -0.312 48.649 64.620 1.00 19.49
ATOM 870 N ALA A 114 1.499 50.077 61.937 1.00 19.34
ATOM 871 CA ALA A 114 2.541 49.589 61.053 1.00 17.80
ATOM 872 C ALA A 114 3.310 50.728 60.449 1.00 20.40
ATOM 873 O ALA A 114 4.371 50.555 59.817 1.00 19.02
ATOM 874 CB ALA A 114 1.850 48.892 59.883 1.00 16.86
ATOM 875 N LEU A 115 2.724 51.914 60.607 1.00 17.74
ATOM 876 CA LEU A 115 3.358 53.026 59.960 1.00 19.94
ATOM 877 C LEU A 115 3.643 54.215 60.826 1.00 19.68
ATOM 878 O LEU A 115 3.052 54.427 61.870 1.00 24.55
ATOM 879 CB LEU A 115 2.440 53.538 58.829 1.00 22.23
ATOM 880 CG LEU A 115 1.963 52.455 57.873 1.00 25.61
ATOM 881 CD1 LEU A 115 0.865 53.050 57.001 1.00 29.64
ATOM 882 CD2 LEU A 115 3.101 51.926 56.999 1.00 20.12
ATOM 883 N GLN A 116 4.578 54.971 60.308 1.00 18.97
ATOM 884 CA GLN A 116 4.990 56.249 60.865 1.00 22.74
ATOM 885 C GLN A 116 5.083 57.265 59.739 1.00 24.89
ATOM 886 O GLN A 116 5.911 57.131 58.823 1.00 20.48
ATOM 887 CB GLN A 116 6.265 56.308 61.706 1.00 23.66
ATOM 888 CG GLN A 116 6.278 57.643 62.492 1.00 31.55
ATOM 889 CD GLN A 116 7.541 57.860 63.291 1.00 28.17
ATOM 890 OE1 GLN A 116 8.409 56.973 63.387 1.00 23.94
ATOM 891 NE2 GLN A 116 7.681 59.062 63.834 1.00 24.04
ATOM 892 N TRP A 117 4.202 58.261 59.817 1.00 25.51
ATOM 893 CA TRP A 117 4.154 59.323 58.829 1.00 24.50
ATOM 894 C TRP A 117 4.873 60.524 59.411 1.00 29.40
ATOM 895 O TRP A 117 4.437 61.044 60.438 1.00 32.14
ATOM 896 CB TRP A 117 2.697 59.715 58.631 1.00 22.31
ATOM 897 CG TRP A 117 1.865 58.712 57.898 1.00 24.18
ATOM 898 CD1 TRP A 117 1.075 57.767 58.475 1.00 27.24
ATOM 899 CD2 TRP A 117 1.671 58.606 56.469 1.00 23.00
ATOM 900 NE1 TRP A 117 0.429 57.046 57.492 1.00 26.67
ATOM 901 CE2 TRP A 117 0.772 57.531 56.253 1.00 26.59
ATOM 902 CE3 TRP A 117 2.185 59.296 55.364 1.00 24.86
ATOM 903 CZ2 TRP A 117 0.347 57.145 54.973 1.00 25.38
ATOM 904 CZ3 TRP A 117 1.789 58.900 54.090 1.00 27.68
ATOM 905 CH2 TRP A 117 0.868 57.855 53.901 1.00 28.07
ATOM 906 N LEU A 118 5.972 60.918 58.769 1.00 23.97
ATOM 907 CA LEU A 118 6.813 62.038 59.185 1.00 25.88
ATOM 908 C LEU A 118 6.557 63.335 58.404 1.00 35.42
ATOM 909 O LEU A 118 6.471 63.345 57.171 1.00 37.58
ATOM 910 CB LEU A 118 8.346 61.756 59.042 1.00 24.73
ATOM 911 CG LEU A 118 8.904 60.441 59.630 1.00 31.22
ATOM 912 CD1 LEU A 118 10.425 60.511 59.713 1.00 27.63
ATOM 913 CD2 LEU A 118 8.372 60.198 61.033 1.00 35.89
ATOM 914 N THR A 119 6.493 64.452 59.136 1.00 29.43

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ATOM    915  CA  THR A 119       6.345  65.763  58.528  1.00 26.58
ATOM    916  C   THR A 119       7.723  66.117  58.011  1.00 28.74
ATOM    917  O   THR A 119       8.715  65.587  58.515  1.00 33.10
ATOM    918  CB  THR A 119       5.913  66.773  59.610  1.00 30.87
ATOM    919  OG1 THR A 119       6.959  66.918  60.570  1.00 43.03
ATOM    920  CG2 THR A 119       4.662  66.239  60.288  1.00 35.04
ATOM    921  N   PRO A 120       7.833  67.008  57.023  1.00 30.76
ATOM    922  CA  PRO A 120       9.151  67.332  56.511  1.00 27.85
ATOM    923  C   PRO A 120      10.131  67.791  57.577  1.00 33.68
ATOM    924  O   PRO A 120      11.342  67.593  57.442  1.00 34.58
ATOM    925  CB  PRO A 120       8.944  68.390  55.431  1.00 29.01
ATOM    926  CG  PRO A 120       7.483  68.312  55.046  1.00 29.59
ATOM    927  CD  PRO A 120       6.768  67.680  56.215  1.00 27.06
ATOM    928  N   GLU A 121       9.603  68.413  58.628  1.00 36.28
ATOM    929  CA  GLU A 121      10.428  68.913  59.735  1.00 41.71
ATOM    930  C   GLU A 121      11.155  67.780  60.421  1.00 46.90
ATOM    931  O   GLU A 121      12.302  67.911  60.852  1.00 45.40
ATOM    932  CB  GLU A 121       9.653  69.674  60.828  1.00 43.86
ATOM    933  CG  GLU A 121       8.117  69.533  60.744  1.00 58.00
ATOM    934  CD  GLU A 121       7.497  70.524  59.787  1.00 95.29
ATOM    935  OE1 GLU A 121       8.029  71.583  59.481  1.00100.00
ATOM    936  OE2 GLU A 121       6.343  70.133  59.295  1.00 59.19
ATOM    937  N   GLN A 122      10.419  66.674  60.509  1.00 40.04
ATOM    938  CA  GLN A 122      10.898  65.442  61.105  1.00 34.75
ATOM    939  C   GLN A 122      11.970  64.761  60.246  1.00 38.46
ATOM    940  O   GLN A 122      12.575  63.775  60.657  1.00 36.92
ATOM    941  CB  GLN A 122       9.688  64.505  61.280  1.00 31.67
ATOM    942  CG  GLN A 122       9.002  64.705  62.627  1.00 23.93
ATOM    943  CD  GLN A 122       7.722  63.930  62.790  1.00 33.52
ATOM    944  OE1 GLN A 122       6.754  64.126  62.036  1.00 38.04
ATOM    945  NE2 GLN A 122       7.682  63.071  63.806  1.00 30.07
ATOM    946  N   THR A 123      12.202  65.252  59.018  1.00 36.12
ATOM    947  CA  THR A 123      13.166  64.626  58.102  1.00 33.51
ATOM    948  C   THR A 123      14.492  65.315  58.131  1.00 36.18
ATOM    949  O   THR A 123      14.617  66.359  58.755  1.00 40.90
ATOM    950  CB  THR A 123      12.671  64.577  56.637  1.00 31.27
ATOM    951  OG1 THR A 123      12.565  65.900  56.137  1.00 38.36
ATOM    952  CG2 THR A 123      11.300  63.912  56.566  1.00 21.97
ATOM    953  N   SER A 124      15.470  64.743  57.448  1.00 30.18
ATOM    954  CA  SER A 124      16.767  65.373  57.441  1.00 30.34
ATOM    955  C   SER A 124      16.774  66.616  56.579  1.00 39.98
ATOM    956  O   SER A 124      17.434  67.609  56.904  1.00 42.72
ATOM    957  CB  SER A 124      17.881  64.484  56.905  1.00 31.00
ATOM    958  OG  SER A 124      18.222  63.434  57.794  1.00 41.86
ATOM    959  N   GLY A 125      16.061  66.515  55.460  1.00 33.12
ATOM    960  CA  GLY A 125      16.018  67.566  54.465  1.00 33.55
ATOM    961  C   GLY A 125      15.115  68.725  54.777  1.00 39.54
ATOM    962  O   GLY A 125      15.324  69.828  54.271  1.00 43.14
ATOM    963  N   LYS A 126      14.105  68.443  55.574  1.00 34.88
ATOM    964  CA  LYS A 126      13.198  69.487  55.950  1.00 35.05
ATOM    965  C   LYS A 126      12.225  69.949  54.863  1.00 43.18
ATOM    966  O   LYS A 126      11.309  70.745  55.156  1.00 41.50
ATOM    967  CB  LYS A 126      13.976  70.652  56.539  1.00 34.53
ATOM    968  CG  LYS A 126      15.059  70.188  57.493  1.00 33.17
ATOM    969  CD  LYS A 126      14.496  69.475  58.710  1.00 28.58
ATOM    970  CE  LYS A 126      15.597  69.005  59.656  1.00 35.70
ATOM    971  NZ  LYS A 126      15.099  68.062  60.666  1.00 53.76
ATOM    972  N   GLU A 127      12.397  69.456  53.632  1.00 34.06
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ATOM 973 CA GLU A 127 11.497 69.879 52.579 1.00 32.35
ATOM 974 C GLU A 127 10.481 68.870 52.125 1.00 41.06
ATOM 975 O GLU A 127 9.583 69.214 51.369 1.00 41.24
ATOM 976 CB GLU A 127 12.231 70.396 51.348 1.00 32.73
ATOM 977 CG GLU A 127 13.167 71.542 51.745 1.00 41.87
ATOM 978 CD GLU A 127 12.515 72.883 51.595 1.00 68.20
ATOM 979 OE1 GLU A 127 11.668 73.152 50.750 1.00 85.44
ATOM 980 OE2 GLU A 127 13.008 73.747 52.442 1.00 94.35
ATOM 981 N HIS A 128 10.603 67.636 52.556 1.00 38.36
ATOM 982 CA HIS A 128 9.649 66.635 52.130 1.00 36.38
ATOM 983 C HIS A 128 9.272 65.683 53.241 1.00 34.84
ATOM 984 O HIS A 128 10.054 65.414 54.148 1.00 33.92
ATOM 985 CB HIS A 128 10.311 65.761 51.062 1.00 39.67
ATOM 986 CG HIS A 128 10.775 66.438 49.801 1.00 44.07
ATOM 987 ND1 HIS A 128 9.885 66.842 48.810 1.00 44.77
ATOM 988 CD2 HIS A 128 12.031 66.713 49.378 1.00 44.57
ATOM 989 CE1 HIS A 128 10.611 67.349 47.836 1.00 44.22
ATOM 990 NE2 HIS A 128 11.905 67.291 48.144 1.00 44.43
ATOM 991 N PRO A 129 8.084 65.124 53.134 1.00 30.93
ATOM 992 CA PRO A 129 7.662 64.165 54.115 1.00 30.73
ATOM 993 C PRO A 129 8.383 62.819 53.902 1.00 32.60
ATOM 994 O PRO A 129 9.307 62.688 53.088 1.00 30.87
ATOM 995 CB PRO A 129 6.152 64.031 53.955 1.00 28.47
ATOM 996 CG PRO A 129 5.892 64.328 52.506 1.00 28.59
ATOM 997 CD PRO A 129 7.023 65.264 52.115 1.00 29.83
ATOM 998 N TYR A 130 7.991 61.816 54.680 1.00 24.05
ATOM 999 CA TYR A 130 8.641 60.521 54.581 1.00 23.32
ATOM 1000 C TYR A 130 7.739 59.482 55.193 1.00 27.11
ATOM 1001 O TYR A 130 7.054 59.735 56.169 1.00 25.99
ATOM 1002 CB TYR A 130 9.927 60.574 55.425 1.00 24.39
ATOM 1003 CG TYR A 130 10.932 59.447 55.270 1.00 26.41
ATOM 1004 CD1 TYR A 130 10.681 58.134 55.683 1.00 26.44
ATOM 1005 CD2 TYR A 130 12.195 59.750 54.765 1.00 26.16
ATOM 1006 CE1 TYR A 130 11.650 57.136 55.575 1.00 19.38
ATOM 1007 CE2 TYR A 130 13.179 58.768 54.644 1.00 26.74
ATOM 1008 CZ TYR A 130 12.900 57.463 55.047 1.00 21.41
ATOM 1009 OH TYR A 130 13.904 56.550 54.915 1.00 24.90
ATOM 1010 N LEU A 131 7.704 58.299 54.639 1.00 26.48
ATOM 1011 CA LEU A 131 6.846 57.288 55.247 1.00 26.34
ATOM 1012 C LEU A 131 7.626 55.976 55.315 1.00 29.76
ATOM 1013 O LEU A 131 8.394 55.705 54.383 1.00 30.08
ATOM 1014 CB LEU A 131 5.511 57.120 54.477 1.00 24.01
ATOM 1015 CG LEU A 131 4.873 55.750 54.658 1.00 25.25
ATOM 1016 CD1 LEU A 131 3.923 55.774 55.850 1.00 22.47
ATOM 1017 CD2 LEU A 131 4.091 55.343 53.420 1.00 26.97
ATOM 1018 N PHE A 132 7.467 55.207 56.412 1.00 24.85
ATOM 1019 CA PHE A 132 8.122 53.906 56.569 1.00 22.86
ATOM 1020 C PHE A 132 7.245 52.905 57.318 1.00 23.01
ATOM 1021 O PHE A 132 6.475 53.255 58.209 1.00 20.93
ATOM 1022 CB PHE A 132 9.575 53.929 57.083 1.00 26.88
ATOM 1023 CG PHE A 132 9.667 54.245 58.567 1.00 29.09
ATOM 1024 CD1 PHE A 132 9.345 53.286 59.532 1.00 28.26
ATOM 1025 CD2 PHE A 132 10.052 55.514 59.005 1.00 29.01
ATOM 1026 CE1 PHE A 132 9.422 53.564 60.899 1.00 23.76
ATOM 1027 CE2 PHE A 132 10.124 55.822 60.364 1.00 26.04
ATOM 1028 CZ PHE A 132 9.808 54.842 61.304 1.00 20.79
ATOM 1029 N SER A 133 7.319 51.632 56.959 1.00 20.01
ATOM 1030 CA SER A 133 6.487 50.644 57.614 1.00 18.49

Sequence Listing

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ATOM   1031  C   SER A 133       7.343  49.758  58.499  1.00 20.07
ATOM   1032  O   SER A 133       8.565  49.721  58.408  1.00 20.93
ATOM   1033  CB  SER A 133       5.820  49.721  56.600  1.00 21.00
ATOM   1034  OG  SER A 133       6.794  48.889  55.979  1.00 19.33
ATOM   1035  N   GLN A 134       6.652  49.019  59.349  1.00 17.53
ATOM   1036  CA  GLN A 134       7.307  48.078  60.224  1.00 16.15
ATOM   1037  C   GLN A 134       6.253  47.039  60.602  1.00 21.22
ATOM   1038  O   GLN A 134       5.445  47.228  61.500  1.00 20.50
ATOM   1039  CB  GLN A 134       8.094  48.787  61.354  1.00 15.03
ATOM   1040  CG  GLN A 134       8.497  47.798  62.475  1.00 22.80
ATOM   1041  CD  GLN A 134       9.449  46.740  61.953  1.00 32.47
ATOM   1042  OE1 GLN A 134      10.430  47.087  61.278  1.00 20.01
ATOM   1043  NE2 GLN A 134       9.174  45.470  62.246  1.00 18.65
ATOM   1044  N   CYS A 135       6.173  45.933  59.853  1.00 20.27
ATOM   1045  CA  CYS A 135       5.121  44.948  60.131  1.00 19.65
ATOM   1046  C   CYS A 135       5.386  43.913  61.204  1.00 19.96
ATOM   1047  O   CYS A 135       4.454  43.422  61.822  1.00 16.67
ATOM   1048  CB  CYS A 135       4.662  44.209  58.847  1.00 18.98
ATOM   1049  SG  CYS A 135       4.157  45.396  57.599  1.00 22.04
ATOM   1050  N   GLN A 136       6.646  43.517  61.379  1.00 20.85
ATOM   1051  CA  GLN A 136       6.936  42.489  62.366  1.00 19.49
ATOM   1052  C   GLN A 136       6.654  43.049  63.750  1.00 17.79
ATOM   1053  O   GLN A 136       7.052  44.180  64.026  1.00 19.64
ATOM   1054  CB  GLN A 136       8.388  41.945  62.208  1.00 18.24
ATOM   1055  CG  GLN A 136       8.670  40.708  63.090  1.00 15.69
ATOM   1056  CD  GLN A 136      10.104  40.218  62.989  1.00 18.82
ATOM   1057  OE1 GLN A 136      10.987  40.986  62.591  1.00 21.40
ATOM   1058  NE2 GLN A 136      10.344  38.964  63.370  1.00 20.32
ATOM   1059  N   ALA A 137       5.965  42.280  64.605  1.00 16.00
ATOM   1060  CA  ALA A 137       5.459  40.921  64.361  1.00 13.64
ATOM   1061  C   ALA A 137       4.096  40.891  63.680  1.00 20.13
ATOM   1062  O   ALA A 137       3.915  40.228  62.670  1.00 19.24
ATOM   1063  CB  ALA A 137       5.345  40.115  65.651  1.00 13.33
ATOM   1064  N   ILE A 138       3.130  41.599  64.237  1.00 17.65
ATOM   1065  CA  ILE A 138       1.812  41.538  63.646  1.00 17.65
ATOM   1066  C   ILE A 138       1.182  42.859  63.250  1.00 17.89
ATOM   1067  O   ILE A 138       0.080  43.166  63.648  1.00 18.12
ATOM   1068  CB  ILE A 138       0.905  40.782  64.584  1.00 21.50
ATOM   1069  CG1 ILE A 138       0.909  41.474  65.949  1.00 23.03
ATOM   1070  CG2 ILE A 138       1.365  39.325  64.715  1.00 17.85
ATOM   1071  CD1 ILE A 138      -0.197  40.954  66.864  1.00 20.51
ATOM   1072  N   HIS A 139       1.883  43.639  62.477  1.00 14.35
ATOM   1073  CA  HIS A 139       1.347  44.918  62.069  1.00 20.04
ATOM   1074  C   HIS A 139       0.947  44.960  60.586  1.00 22.63
ATOM   1075  O   HIS A 139       0.405  45.970  60.153  1.00 21.50
ATOM   1076  CB  HIS A 139       2.294  46.104  62.418  1.00 20.69
ATOM   1077  CG  HIS A 139       2.542  46.181  63.905  1.00 22.28
ATOM   1078  ND1 HIS A 139       1.598  46.682  64.780  1.00 21.42
ATOM   1079  CD2 HIS A 139       3.607  45.772  64.641  1.00 20.30
ATOM   1080  CE1 HIS A 139       2.102  46.574  66.004  1.00 21.50
ATOM   1081  NE2 HIS A 139       3.316  46.043  65.948  1.00 20.79
ATOM   1082  N   CYS A 140       1.231  43.891  59.817  1.00 23.70
ATOM   1083  CA  CYS A 140       0.854  43.842  58.393  1.00 20.51
ATOM   1084  C   CYS A 140      -0.641  44.154  58.238  1.00 18.21
ATOM   1085  O   CYS A 140      -1.080  44.926  57.384  1.00 21.51
ATOM   1086  CB  CYS A 140       1.244  42.523  57.676  1.00 18.69
ATOM   1087  SG  CYS A 140       1.220  42.744  55.865  1.00 23.45
ATOM   1088  N   ARG A 141      -1.403  43.548  59.139  1.00 17.49
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ATOM 1089 CA ARG A 141 -2.849 43.681 59.236 1.00 19.29
ATOM 1090 C ARG A 141 -3.305 45.119 59.365 1.00 29.79
ATOM 1091 O ARG A 141 -4.507 45.415 59.189 1.00 29.48
ATOM 1092 CB ARG A 141 -3.435 42.857 60.368 1.00 19.28
ATOM 1093 CG ARG A 141 -3.041 43.331 61.779 1.00 17.77
ATOM 1094 CD ARG A 141 -3.499 42.358 62.853 1.00 11.79
ATOM 1095 NE ARG A 141 -2.697 41.124 62.834 1.00 18.11
ATOM 1096 CZ ARG A 141 -2.823 40.137 63.712 1.00 23.12
ATOM 1097 NH1 ARG A 141 -3.704 40.177 64.695 1.00 16.74
ATOM 1098 NH2 ARG A 141 -2.046 39.061 63.605 1.00 17.67
ATOM 1099 N ALA A 142 -2.326 45.981 59.695 1.00 22.16
ATOM 1100 CA ALA A 142 -2.572 47.406 59.886 1.00 21.34
ATOM 1101 C ALA A 142 -2.316 48.113 58.587 1.00 30.29
ATOM 1102 O ALA A 142 -2.436 49.334 58.521 1.00 28.98
ATOM 1103 CB ALA A 142 -1.797 48.097 61.022 1.00 18.86
ATOM 1104 N ILE A 143 -1.929 47.346 57.563 1.00 25.27
ATOM 1105 CA ILE A 143 -1.681 47.999 56.299 1.00 24.86
ATOM 1106 C ILE A 143 -2.654 47.464 55.249 1.00 33.21
ATOM 1107 O ILE A 143 -3.086 48.191 54.363 1.00 30.61
ATOM 1108 CB ILE A 143 -0.279 47.766 55.801 1.00 27.48
ATOM 1109 CG1 ILE A 143 0.735 48.464 56.683 1.00 25.48
ATOM 1110 CG2 ILE A 143 -0.178 48.243 54.355 1.00 30.86
ATOM 1111 CD1 ILE A 143 2.134 48.057 56.257 1.00 21.10
ATOM 1112 N LEU A 144 -2.968 46.170 55.368 1.00 28.50
ATOM 1113 CA LEU A 144 -3.882 45.474 54.469 1.00 27.04
ATOM 1114 C LEU A 144 -4.383 44.197 55.122 1.00 31.13
ATOM 1115 O LEU A 144 -3.786 43.658 56.047 1.00 31.11
ATOM 1116 CB LEU A 144 -3.260 45.191 53.076 1.00 27.85
ATOM 1117 CG LEU A 144 -1.930 44.437 53.144 1.00 33.41
ATOM 1118 CD1 LEU A 144 -2.147 42.925 53.111 1.00 34.28
ATOM 1119 CD2 LEU A 144 -0.919 44.879 52.090 1.00 30.37
ATOM 1120 N PRO A 145 -5.499 43.703 54.628 1.00 28.27
ATOM 1121 CA PRO A 145 -6.113 42.489 55.143 1.00 25.97
ATOM 1122 C PRO A 145 -5.306 41.275 54.704 1.00 25.80
ATOM 1123 O PRO A 145 -4.911 41.145 53.543 1.00 26.89
ATOM 1124 CB PRO A 145 -7.527 42.445 54.533 1.00 25.97
ATOM 1125 CG PRO A 145 -7.710 43.760 53.795 1.00 30.32
ATOM 1126 CD PRO A 145 -6.334 44.377 53.597 1.00 26.43
ATOM 1127 N CYS A 146 -5.069 40.391 55.649 1.00 23.44
ATOM 1128 CA CYS A 146 -4.275 39.215 55.366 1.00 22.20
ATOM 1129 C CYS A 146 -4.338 38.173 56.478 1.00 25.91
ATOM 1130 O CYS A 146 -4.902 38.365 57.556 1.00 24.21
ATOM 1131 CB CYS A 146 -2.794 39.660 55.211 1.00 22.20
ATOM 1132 SG CYS A 146 -2.122 40.656 56.610 1.00 27.07
ATOM 1133 N GLN A 147 -3.724 37.035 56.188 1.00 20.89
ATOM 1134 CA GLN A 147 -3.599 36.004 57.192 1.00 23.58
ATOM 1135 C GLN A 147 -2.316 36.481 57.865 1.00 28.69
ATOM 1136 O GLN A 147 -1.215 36.252 57.340 1.00 22.63
ATOM 1137 CB GLN A 147 -3.359 34.659 56.495 1.00 24.70
ATOM 1138 CG GLN A 147 -4.631 34.245 55.737 1.00 27.61
ATOM 1139 CD GLN A 147 -4.456 32.860 55.173 1.00 26.33
ATOM 1140 OE1 GLN A 147 -3.925 32.699 54.073 1.00 23.99
ATOM 1141 NE2 GLN A 147 -4.810 31.863 55.964 1.00 18.80
ATOM 1142 N ASP A 148 -2.463 37.259 58.942 1.00 20.89
ATOM 1143 CA ASP A 148 -1.291 37.835 59.571 1.00 18.90
ATOM 1144 C ASP A 148 -0.592 36.901 60.547 1.00 24.63
ATOM 1145 O ASP A 148 -0.574 37.083 61.783 1.00 17.53
ATOM 1146 CB ASP A 148 -1.555 39.263 60.107 1.00 22.11

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ATOM   1147  CG  ASP A 148      -0.290  40.036  60.382  1.00 23.46
ATOM   1148  OD1 ASP A 148       0.830  39.631  60.126  1.00 20.04
ATOM   1149  OD2 ASP A 148      -0.520  41.204  60.918  1.00 15.15
ATOM   1150  N   THR A 149      -0.023  35.882  59.906  1.00 18.46
ATOM   1151  CA  THR A 149       0.687  34.803  60.545  1.00 17.87
ATOM   1152  C   THR A 149       1.872  34.337  59.711  1.00 21.17
ATOM   1153  O   THR A 149       1.851  34.344  58.469  1.00 19.34
ATOM   1154  CB  THR A 149      -0.253  33.637  60.815  1.00 26.95
ATOM   1155  OG1 THR A 149       0.516  32.550  61.300  1.00 22.82
ATOM   1156  CG2 THR A 149      -0.967  33.249  59.523  1.00 21.04
ATOM   1157  N   PRO A 150       2.955  34.037  60.439  1.00 22.13
ATOM   1158  CA  PRO A 150       4.193  33.603  59.793  1.00 19.85
ATOM   1159  C   PRO A 150       4.062  32.165  59.262  1.00 21.47
ATOM   1160  O   PRO A 150       4.957  31.652  58.608  1.00 20.72
ATOM   1161  CB  PRO A 150       5.303  33.687  60.879  1.00 15.21
ATOM   1162  CG  PRO A 150       4.598  33.656  62.214  1.00 16.09
ATOM   1163  CD  PRO A 150       3.182  34.142  61.931  1.00 19.51
ATOM   1164  N   SER A 151       2.946  31.502  59.556  1.00 20.72
ATOM   1165  CA  SER A 151       2.753  30.139  59.123  1.00 19.30
ATOM   1166  C   SER A 151       2.344  30.061  57.674  1.00 24.34
ATOM   1167  O   SER A 151       2.298  28.979  57.111  1.00 24.80
ATOM   1168  CB  SER A 151       1.721  29.408  59.969  1.00 22.49
ATOM   1169  OG  SER A 151       0.452  30.037  59.850  1.00 23.08
ATOM   1170  N   VAL A 152       2.082  31.215  57.085  1.00 22.82
ATOM   1171  CA  VAL A 152       1.685  31.325  55.685  1.00 19.43
ATOM   1172  C   VAL A 152       2.725  32.126  54.909  1.00 22.28
ATOM   1173  O   VAL A 152       3.185  33.171  55.367  1.00 23.44
ATOM   1174  CB  VAL A 152       0.296  31.991  55.596  1.00 19.43
ATOM   1175  CG1 VAL A 152      -0.092  32.406  54.175  1.00 16.67
ATOM   1176  CG2 VAL A 152      -0.781  31.119  56.239  1.00 19.27
ATOM   1177  N   LYS A 153       3.106  31.656  53.706  1.00 21.18
ATOM   1178  CA  LYS A 153       4.085  32.363  52.891  1.00 17.74
ATOM   1179  C   LYS A 153       3.527  32.635  51.521  1.00 21.28
ATOM   1180  O   LYS A 153       2.866  31.793  50.953  1.00 23.85
ATOM   1181  CB  LYS A 153       5.402  31.603  52.767  1.00 21.27
ATOM   1182  CG  LYS A 153       6.115  31.460  54.112  1.00 21.51
ATOM   1183  CD  LYS A 153       7.546  30.998  53.962  1.00 21.26
ATOM   1184  CE  LYS A 153       8.143  30.501  55.268  1.00 22.91
ATOM   1185  NZ  LYS A 153       9.585  30.192  55.152  1.00 21.73
ATOM   1186  N   LEU A 154       3.794  33.808  50.990  1.00 18.71
ATOM   1187  CA  LEU A 154       3.268  34.151  49.675  1.00 21.43
ATOM   1188  C   LEU A 154       4.245  34.964  48.904  1.00 26.20
ATOM   1189  O   LEU A 154       5.175  35.574  49.459  1.00 24.62
ATOM   1190  CB  LEU A 154       2.001  35.045  49.770  1.00 22.21
ATOM   1191  CG  LEU A 154       2.136  36.216  50.782  1.00 27.62
ATOM   1192  CD1 LEU A 154       1.461  37.505  50.309  1.00 25.48
ATOM   1193  CD2 LEU A 154       1.539  35.818  52.132  1.00 28.38
ATOM   1194  N   THR A 155       3.982  34.986  47.604  1.00 24.13
ATOM   1195  CA  THR A 155       4.809  35.831  46.784  1.00 23.94
ATOM   1196  C   THR A 155       3.962  37.100  46.641  1.00 23.99
ATOM   1197  O   THR A 155       2.791  37.148  47.030  1.00 24.22
ATOM   1198  CB  THR A 155       5.109  35.211  45.401  1.00 29.86
ATOM   1199  OG1 THR A 155       3.917  34.628  44.909  1.00 36.32
ATOM   1200  CG2 THR A 155       6.215  34.173  45.519  1.00 16.93
ATOM   1201  N   TYR A 156       4.539  38.129  46.059  1.00 25.56
ATOM   1202  CA  TYR A 156       3.766  39.336  45.874  1.00 25.78
ATOM   1203  C   TYR A 156       4.359  40.271  44.856  1.00 25.37
ATOM   1204  O   TYR A 156       5.552  40.309  44.566  1.00 29.83
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ATOM 1205 CB TYR A 156 3.525 40.115 47.183 1.00 27.00
ATOM 1206 CG TYR A 156 4.670 41.016 47.641 1.00 27.39
ATOM 1207 CD1 TYR A 156 4.801 42.315 47.146 1.00 30.16
ATOM 1208 CD2 TYR A 156 5.595 40.604 48.607 1.00 25.30
ATOM 1209 CE1 TYR A 156 5.821 43.164 47.579 1.00 33.17
ATOM 1210 CE2 TYR A 156 6.619 41.443 49.051 1.00 25.54
ATOM 1211 CZ TYR A 156 6.732 42.746 48.553 1.00 39.24
ATOM 1212 OH TYR A 156 7.722 43.618 49.005 1.00 26.94
ATOM 1213 N THR A 157 3.468 41.057 44.314 1.00 25.18
ATOM 1214 CA THR A 157 3.850 42.069 43.361 1.00 26.36
ATOM 1215 C THR A 157 3.121 43.339 43.762 1.00 26.72
ATOM 1216 O THR A 157 2.006 43.287 44.271 1.00 29.15
ATOM 1217 CB THR A 157 3.556 41.663 41.903 1.00 38.57
ATOM 1218 OG1 THR A 157 2.297 41.030 41.834 1.00 38.99
ATOM 1219 CG2 THR A 157 4.639 40.682 41.499 1.00 35.90
ATOM 1220 N ALA A 158 3.753 44.470 43.552 1.00 28.59
ATOM 1221 CA ALA A 158 3.100 45.700 43.942 1.00 33.23
ATOM 1222 C ALA A 158 3.495 46.868 43.051 1.00 37.76
ATOM 1223 O ALA A 158 4.598 46.946 42.482 1.00 35.09
ATOM 1224 CB ALA A 158 3.487 46.038 45.382 1.00 34.39
ATOM 1225 N GLU A 159 2.557 47.793 42.962 1.00 36.52
ATOM 1226 CA GLU A 159 2.779 49.011 42.213 1.00 38.54
ATOM 1227 C GLU A 159 2.305 50.109 43.125 1.00 33.69
ATOM 1228 O GLU A 159 1.204 50.050 43.690 1.00 29.21
ATOM 1229 CB GLU A 159 2.119 49.064 40.829 1.00 42.31
ATOM 1230 CG GLU A 159 1.120 47.914 40.600 1.00 75.57
ATOM 1231 CD GLU A 159 1.146 47.437 39.182 1.00 99.03
ATOM 1232 OE1 GLU A 159 0.467 47.937 38.296 1.00 77.74
ATOM 1233 OE2 GLU A 159 2.010 46.464 39.021 1.00 90.11
ATOM 1234 N VAL A 160 3.181 51.064 43.345 1.00 30.74
ATOM 1235 CA VAL A 160 2.726 52.053 44.289 1.00 32.22
ATOM 1236 C VAL A 160 2.872 53.454 43.745 1.00 36.18
ATOM 1237 O VAL A 160 3.942 53.801 43.239 1.00 32.54
ATOM 1238 CB VAL A 160 3.367 51.832 45.665 1.00 31.25
ATOM 1239 CG1 VAL A 160 4.614 50.978 45.535 1.00 32.36
ATOM 1240 CG2 VAL A 160 3.697 53.130 46.385 1.00 27.21
ATOM 1241 N SER A 161 1.776 54.222 43.839 1.00 34.59
ATOM 1242 CA SER A 161 1.825 55.583 43.353 1.00 33.57
ATOM 1243 C SER A 161 2.245 56.562 44.417 1.00 35.27
ATOM 1244 O SER A 161 1.623 56.619 45.487 1.00 31.96
ATOM 1245 CB SER A 161 0.547 56.111 42.745 1.00 33.76
ATOM 1246 OG SER A 161 0.919 57.320 42.106 1.00 38.24
ATOM 1247 N VAL A 162 3.285 57.313 44.054 1.00 35.28
ATOM 1248 CA VAL A 162 3.825 58.333 44.924 1.00 36.08
ATOM 1249 C VAL A 162 4.182 59.588 44.159 1.00 43.76
ATOM 1250 O VAL A 162 4.516 59.520 42.981 1.00 41.88
ATOM 1251 CB VAL A 162 5.095 57.910 45.667 1.00 32.84
ATOM 1252 CG1 VAL A 162 4.886 56.616 46.447 1.00 29.71
ATOM 1253 CG2 VAL A 162 6.294 57.870 44.722 1.00 30.90
ATOM 1254 N PRO A 163 4.151 60.694 44.905 1.00 38.10
ATOM 1255 CA PRO A 163 4.485 62.002 44.432 1.00 34.34
ATOM 1256 C PRO A 163 5.769 61.963 43.679 1.00 42.25
ATOM 1257 O PRO A 163 6.785 61.519 44.193 1.00 45.19
ATOM 1258 CB PRO A 163 4.577 62.867 45.689 1.00 35.12
ATOM 1259 CG PRO A 163 3.694 62.203 46.730 1.00 38.80
ATOM 1260 CD PRO A 163 3.454 60.787 46.223 1.00 35.96
ATOM 1261 N LYS A 164 5.662 62.415 42.444 1.00 45.01
ATOM 1262 CA LYS A 164 6.755 62.457 41.497 1.00 46.89

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ATOM	1263	C	LYS	A	164	8.111	62.681	42.151	1.00 46.24
ATOM	1264	O	LYS	A	164	9.119	62.088	41.784	1.00 46.96
ATOM	1265	CB	LYS	A	164	6.556	63.551	40.440	1.00 55.91
ATOM	1266	CG	LYS	A	164	5.133	63.813	39.942	1.00 97.37
ATOM	1267	CD	LYS	A	164	5.012	64.953	38.913	1.00100.00
ATOM	1268	CE	LYS	A	164	5.120	64.558	37.434	1.00100.00
ATOM	1269	NZ	LYS	A	164	3.833	64.450	36.718	1.00100.00
ATOM	1270	N	GLU	A	165	8.164	63.595	43.102	1.00 42.61
ATOM	1271	CA	GLU	A	165	9.422	63.941	43.749	1.00 45.37
ATOM	1272	C	GLU	A	165	10.005	62.929	44.747	1.00 47.34
ATOM	1273	O	GLU	A	165	11.156	63.001	45.179	1.00 43.70
ATOM	1274	CB	GLU	A	165	9.349	65.366	44.343	1.00 47.53
ATOM	1275	CG	GLU	A	165	8.275	65.541	45.446	1.00 66.49
ATOM	1276	CD	GLU	A	165	6.837	65.640	44.991	1.00 96.79
ATOM	1277	OE1	GLU	A	165	6.436	65.365	43.864	1.00 99.56
ATOM	1278	OE2	GLU	A	165	6.056	66.058	45.964	1.00 77.24
ATOM	1279	N	LEU	A	166	9.197	61.958	45.118	1.00 44.94
ATOM	1280	CA	LEU	A	166	9.647	60.996	46.084	1.00 40.65
ATOM	1281	C	LEU	A	166	9.908	59.636	45.497	1.00 50.07
ATOM	1282	O	LEU	A	166	9.354	59.307	44.443	1.00 52.03
ATOM	1283	CB	LEU	A	166	8.566	60.917	47.170	1.00 35.62
ATOM	1284	CG	LEU	A	166	8.264	62.286	47.766	1.00 31.47
ATOM	1285	CD1	LEU	A	166	7.234	62.081	48.848	1.00 29.41
ATOM	1286	CD2	LEU	A	166	9.521	62.927	48.364	1.00 25.32
ATOM	1287	N	VAL	A	167	10.744	58.884	46.229	1.00 43.25
ATOM	1288	CA	VAL	A	167	11.112	57.508	45.933	1.00 39.13
ATOM	1289	C	VAL	A	167	10.432	56.490	46.855	1.00 44.52
ATOM	1290	O	VAL	A	167	10.327	56.679	48.074	1.00 39.15
ATOM	1291	CB	VAL	A	167	12.592	57.293	46.083	1.00 37.94
ATOM	1292	CG1	VAL	A	167	12.920	55.922	45.515	1.00 35.52
ATOM	1293	CG2	VAL	A	167	13.303	58.401	45.345	1.00 37.13
ATOM	1294	N	ALA	A	168	9.998	55.394	46.233	1.00 39.32
ATOM	1295	CA	ALA	A	168	9.363	54.288	46.918	1.00 34.98
ATOM	1296	C	ALA	A	168	10.209	53.034	46.762	1.00 40.61
ATOM	1297	O	ALA	A	168	10.720	52.782	45.671	1.00 40.08
ATOM	1298	CB	ALA	A	168	7.957	54.003	46.427	1.00 33.16
ATOM	1299	N	LEU	A	169	10.380	52.295	47.876	1.00 32.03
ATOM	1300	CA	LEU	A	169	11.104	51.038	47.926	1.00 27.11
ATOM	1301	C	LEU	A	169	10.289	50.039	48.717	1.00 32.61
ATOM	1302	O	LEU	A	169	9.460	50.400	49.544	1.00 33.15
ATOM	1303	CB	LEU	A	169	12.543	51.071	48.449	1.00 25.35
ATOM	1304	CG	LEU	A	169	13.362	52.250	47.964	1.00 29.91
ATOM	1305	CD1	LEU	A	169	14.686	52.206	48.708	1.00 29.99
ATOM	1306	CD2	LEU	A	169	13.676	52.118	46.482	1.00 29.66
ATOM	1307	N	MET	A	170	10.495	48.764	48.417	1.00 31.01
ATOM	1308	CA	MET	A	170	9.811	47.680	49.081	1.00 25.79
ATOM	1309	C	MET	A	170	10.757	46.537	49.309	1.00 24.72
ATOM	1310	O	MET	A	170	11.896	46.474	48.835	1.00 23.26
ATOM	1311	CB	MET	A	170	8.569	47.164	48.337	1.00 28.25
ATOM	1312	CG	MET	A	170	7.556	48.274	48.171	1.00 31.25
ATOM	1313	SD	MET	A	170	5.901	47.652	47.812	1.00 35.46
ATOM	1314	CE	MET	A	170	5.341	46.854	49.347	1.00 30.63
ATOM	1315	N	SER	A	171	10.265	45.599	50.078	1.00 25.49
ATOM	1316	CA	SER	A	171	11.080	44.433	50.331	1.00 23.48
ATOM	1317	C	SER	A	171	10.947	43.519	49.087	1.00 26.82
ATOM	1318	O	SER	A	171	10.414	42.426	49.110	1.00 22.63
ATOM	1319	CB	SER	A	171	10.623	43.790	51.641	1.00 18.95
ATOM	1320	OG	SER	A	171	9.230	43.521	51.646	1.00 24.18

ATOM	1321	N	ALA	A	172	11.378	43.996	47.944	1.00	28.35
ATOM	1322	CA	ALA	A	172	11.234	43.201	46.752	1.00	28.47
ATOM	1323	C	ALA	A	172	12.201	43.688	45.722	1.00	31.99
ATOM	1324	O	ALA	A	172	12.997	44.593	45.971	1.00	30.63
ATOM	1325	CB	ALA	A	172	9.829	43.376	46.201	1.00	29.09
ATOM	1326	N	ILE	A	173	12.116	43.086	44.546	1.00	34.66
ATOM	1327	CA	ILE	A	173	12.998	43.523	43.461	1.00	34.83
ATOM	1328	C	ILE	A	173	12.335	44.698	42.748	1.00	30.47
ATOM	1329	O	ILE	A	173	11.131	44.679	42.428	1.00	26.31
ATOM	1330	CB	ILE	A	173	13.395	42.387	42.489	1.00	39.20
ATOM	1331	CG1	ILE	A	173	14.129	41.209	43.136	1.00	36.75
ATOM	1332	CG2	ILE	A	173	14.187	42.873	41.289	1.00	44.70
ATOM	1333	CD1	ILE	A	173	15.550	41.465	43.629	1.00	30.83
ATOM	1334	N	ARG	A	174	13.099	45.770	42.566	1.00	34.59
ATOM	1335	CA	ARG	A	174	12.570	46.949	41.885	1.00	38.22
ATOM	1336	C	ARG	A	174	12.357	46.486	40.452	1.00	53.38
ATOM	1337	O	ARG	A	174	13.316	46.011	39.836	1.00	51.64
ATOM	1338	CB	ARG	A	174	13.605	48.057	41.889	1.00	33.91
ATOM	1339	CG	ARG	A	174	13.671	48.862	43.182	1.00	39.95
ATOM	1340	CD	ARG	A	174	14.912	49.754	43.233	1.00	34.61
ATOM	1341	NE	ARG	A	174	16.083	49.015	43.674	1.00	62.75
ATOM	1342	CZ	ARG	A	174	17.292	49.144	43.151	1.00	81.12
ATOM	1343	NH1	ARG	A	174	17.505	50.000	42.133	1.00	38.29
ATOM	1344	NH2	ARG	A	174	18.276	48.393	43.686	1.00	52.86
ATOM	1345	N	ASP	A	175	11.119	46.550	39.968	1.00	59.05
ATOM	1346	CA	ASP	A	175	10.801	46.044	38.640	1.00	65.93
ATOM	1347	C	ASP	A	175	10.737	47.100	37.551	1.00	83.82
ATOM	1348	O	ASP	A	175	10.852	46.833	36.342	1.00	91.77
ATOM	1349	CB	ASP	A	175	9.567	45.123	38.677	1.00	67.87
ATOM	1350	CG	ASP	A	175	9.102	44.615	37.340	1.00	73.42
ATOM	1351	OD1	ASP	A	175	9.855	44.262	36.438	1.00	75.53
ATOM	1352	OD2	ASP	A	175	7.785	44.579	37.288	1.00	72.28
ATOM	1353	N	GLY	A	176	10.553	48.327	38.002	1.00	77.53
ATOM	1354	CA	GLY	A	176	10.469	49.438	37.089	1.00	77.66
ATOM	1355	C	GLY	A	176	9.804	50.660	37.704	1.00	82.05
ATOM	1356	O	GLY	A	176	9.128	50.560	38.731	1.00	79.00
ATOM	1357	N	GLU	A	177	9.995	51.815	37.044	1.00	81.79
ATOM	1358	CA	GLU	A	177	9.441	53.110	37.460	1.00	81.14
ATOM	1359	C	GLU	A	177	8.800	53.917	36.333	1.00	86.27
ATOM	1360	O	GLU	A	177	9.419	54.218	35.313	1.00	88.04
ATOM	1361	CB	GLU	A	177	10.468	53.977	38.210	1.00	82.57
ATOM	1362	CG	GLU	A	177	11.115	55.073	37.340	1.00	93.83
ATOM	1363	CD	GLU	A	177	11.662	56.220	38.142	1.00	98.70
ATOM	1364	OE1	GLU	A	177	11.271	57.364	38.000	1.00	62.12
ATOM	1365	OE2	GLU	A	177	12.591	55.841	38.995	1.00	78.07
ATOM	1366	N	THR	A	178	7.533	54.280	36.503	1.00	82.50
ATOM	1367	CA	THR	A	178	6.844	55.029	35.463	1.00	81.70
ATOM	1368	C	THR	A	178	5.796	56.028	35.929	1.00	86.29
ATOM	1369	O	THR	A	178	5.013	55.811	36.856	1.00	88.24
ATOM	1370	CB	THR	A	178	6.159	54.082	34.451	1.00	79.12
ATOM	1371	OG1	THR	A	178	4.886	53.673	34.940	1.00	55.06
ATOM	1372	CG2	THR	A	178	7.052	52.877	34.149	1.00	83.66
ATOM	1373	N	PRO	A	179	5.764	57.151	35.223	1.00	78.88
ATOM	1374	CA	PRO	A	179	4.768	58.141	35.519	1.00	74.33
ATOM	1375	C	PRO	A	179	3.379	57.551	35.463	1.00	70.74
ATOM	1376	O	PRO	A	179	3.038	56.679	34.668	1.00	66.51
ATOM	1377	CB	PRO	A	179	4.879	59.210	34.446	1.00	76.32
ATOM	1378	CG	PRO	A	179	6.182	58.950	33.705	1.00	83.60

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ATOM   1379  CD  PRO A 179       6.791  57.663  34.270  1.00 80.56
ATOM   1380  N   ASP A 180       2.597  58.025  36.405  1.00 66.91
ATOM   1381  CA  ASP A 180       1.242  57.625  36.543  1.00 66.81
ATOM   1382  C   ASP A 180       0.510  58.373  35.459  1.00 86.40
ATOM   1383  O   ASP A 180       1.063  59.307  34.883  1.00 89.77
ATOM   1384  CB  ASP A 180       0.808  58.093  37.946  1.00 63.63
ATOM   1385  CG  ASP A 180      -0.408  57.401  38.482  1.00 74.66
ATOM   1386  OD1 ASP A 180      -0.968  56.519  37.870  1.00 83.41
ATOM   1387  OD2 ASP A 180      -0.812  57.829  39.655  1.00 69.97
ATOM   1388  N   PRO A 181      -0.732  57.992  35.187  1.00 90.42
ATOM   1389  CA  PRO A 181      -1.584  58.645  34.218  1.00 91.10
ATOM   1390  C   PRO A 181      -2.945  58.619  34.873  1.00 91.79
ATOM   1391  O   PRO A 181      -3.748  57.724  34.638  1.00 87.89
ATOM   1392  CB  PRO A 181      -1.541  57.787  32.929  1.00 94.08
ATOM   1393  CG  PRO A 181      -0.582  56.635  33.200  1.00 98.94
ATOM   1394  CD  PRO A 181      -0.115  56.760  34.655  1.00 92.93
ATOM   1395  N   GLU A 182      -3.175  59.556  35.793  1.00 88.82
ATOM   1396  CA  GLU A 182      -4.443  59.519  36.506  1.00 89.31
ATOM   1397  C   GLU A 182      -4.808  60.809  37.218  1.00 98.64
ATOM   1398  O   GLU A 182      -5.181  60.787  38.385  1.00 99.08
ATOM   1399  CB  GLU A 182      -4.359  58.380  37.528  1.00 90.42
ATOM   1400  CG  GLU A 182      -5.510  57.373  37.391  1.00 98.92
ATOM   1401  CD  GLU A 182      -6.826  58.010  37.750  1.00100.00
ATOM   1402  OE1 GLU A 182      -7.465  58.719  36.986  1.00100.00
ATOM   1403  OE2 GLU A 182      -7.169  57.806  39.003  1.00100.00
ATOM   1404  N   ASP A 183      -4.704  61.939  36.487  1.00100.00
ATOM   1405  CA  ASP A 183      -4.952  63.289  37.021  1.00100.00
ATOM   1406  C   ASP A 183      -4.112  63.534  38.264  1.00100.00
ATOM   1407  O   ASP A 183      -4.557  64.229  39.192  1.00100.00
ATOM   1408  CB  ASP A 183      -6.460  63.709  37.195  1.00100.00
ATOM   1409  CG  ASP A 183      -7.509  62.613  37.228  1.00100.00
ATOM   1410  OD1 ASP A 183      -8.091  62.209  36.225  1.00100.00
ATOM   1411  OD2 ASP A 183      -7.745  62.155  38.451  1.00100.00
ATOM   1412  N   PRO A 184      -2.878  62.960  38.272  1.00 97.37
ATOM   1413  CA  PRO A 184      -2.075  63.104  39.462  1.00 95.12
ATOM   1414  C   PRO A 184      -0.708  63.687  39.190  1.00 98.12
ATOM   1415  O   PRO A 184      -0.248  63.872  38.049  1.00 96.48
ATOM   1416  CB  PRO A 184      -1.735  61.635  39.703  1.00 96.33
ATOM   1417  CG  PRO A 184      -1.335  61.138  38.314  1.00100.00
ATOM   1418  CD  PRO A 184      -2.110  62.028  37.363  1.00 96.08
ATOM   1419  N   SER A 185      -0.023  63.913  40.311  1.00 92.79
ATOM   1420  CA  SER A 185       1.347  64.393  40.313  1.00 88.74
ATOM   1421  C   SER A 185       2.206  63.348  41.012  1.00 81.94
ATOM   1422  O   SER A 185       3.066  63.667  41.846  1.00 84.44
ATOM   1423  CB  SER A 185       1.541  65.771  40.914  1.00 93.34
ATOM   1424  OG  SER A 185       2.614  66.419  40.251  1.00100.00
ATOM   1425  N   ARG A 186       1.930  62.095  40.627  1.00 64.19
ATOM   1426  CA  ARG A 186       2.596  60.947  41.162  1.00 59.49
ATOM   1427  C   ARG A 186       3.282  60.116  40.116  1.00 59.45
ATOM   1428  O   ARG A 186       3.053  60.227  38.916  1.00 59.05
ATOM   1429  CB  ARG A 186       1.659  60.042  41.958  1.00 55.86
ATOM   1430  CG  ARG A 186       0.324  60.675  42.291  1.00 27.25
ATOM   1431  CD  ARG A 186      -0.548  59.827  43.204  1.00 57.78
ATOM   1432  NE  ARG A 186       0.194  59.220  44.306  1.00 80.89
ATOM   1433  CZ  ARG A 186       0.569  59.842  45.420  1.00 97.56
ATOM   1434  NH1 ARG A 186       0.297  61.124  45.643  1.00 83.79
ATOM   1435  NH2 ARG A 186       1.235  59.142  46.335  1.00 85.34
ATOM   1436  N   LYS A 187       4.128  59.268  40.675  1.00 53.71
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ATOM   1437  CA  LYS A 187       4.904  58.295  39.970  1.00 50.62
ATOM   1438  C   LYS A 187       4.359  56.988  40.450  1.00 53.26
ATOM   1439  O   LYS A 187       3.776  56.881  41.543  1.00 51.61
ATOM   1440  CB  LYS A 187       6.351  58.266  40.393  1.00 52.26
ATOM   1441  CG  LYS A 187       7.282  59.118  39.571  1.00 54.27
ATOM   1442  CD  LYS A 187       8.703  58.584  39.606  1.00 55.39
ATOM   1443  CE  LYS A 187       9.728  59.611  40.051  1.00 31.63
ATOM   1444  NZ  LYS A 187      11.058  59.374  39.481  1.00 46.19
ATOM   1445  N   ILE A 188       4.598  56.025  39.584  1.00 49.44
ATOM   1446  CA  ILE A 188       4.200  54.683  39.845  1.00 48.00
ATOM   1447  C   ILE A 188       5.361  53.694  39.935  1.00 53.77
ATOM   1448  O   ILE A 188       6.057  53.436  38.951  1.00 53.51
ATOM   1449  CB  ILE A 188       2.753  54.307  39.572  1.00 49.99
ATOM   1450  CG1 ILE A 188       2.558  52.804  39.554  1.00 51.55
ATOM   1451  CG2 ILE A 188       2.229  54.973  38.315  1.00 51.74
ATOM   1452  CD1 ILE A 188       1.336  52.415  40.385  1.00 80.62
ATOM   1453  N   TYR A 189       5.640  53.226  41.166  1.00 45.90
ATOM   1454  CA  TYR A 189       6.742  52.322  41.402  1.00 40.92
ATOM   1455  C   TYR A 189       6.330  50.851  41.496  1.00 40.81
ATOM   1456  O   TYR A 189       5.362  50.493  42.188  1.00 39.23
ATOM   1457  CB  TYR A 189       7.528  52.773  42.638  1.00 40.24
ATOM   1458  CG  TYR A 189       8.427  53.968  42.455  1.00 31.23
ATOM   1459  CD1 TYR A 189       9.711  53.803  41.939  1.00 31.58
ATOM   1460  CD2 TYR A 189       8.046  55.239  42.886  1.00 30.59
ATOM   1461  CE1 TYR A 189      10.593  54.879  41.813  1.00 34.77
ATOM   1462  CE2 TYR A 189       8.913  56.328  42.764  1.00 31.23
ATOM   1463  CZ  TYR A 189      10.188  56.151  42.224  1.00 39.57
ATOM   1464  OH  TYR A 189      11.058  57.218  42.096  1.00 34.19
ATOM   1465  N   LYS A 190       7.123  50.034  40.775  1.00 39.37
ATOM   1466  CA  LYS A 190       6.971  48.589  40.627  1.00 39.51
ATOM   1467  C   LYS A 190       8.024  47.700  41.305  1.00 35.21
ATOM   1468  O   LYS A 190       9.235  47.928  41.275  1.00 32.65
ATOM   1469  CB  LYS A 190       6.775  48.214  39.161  1.00 43.13
ATOM   1470  CG  LYS A 190       5.359  48.468  38.642  1.00 68.06
ATOM   1471  CD  LYS A 190       5.308  49.170  37.290  1.00 80.52
ATOM   1472  CE  LYS A 190       5.559  48.262  36.089  1.00100.00
ATOM   1473  NZ  LYS A 190       6.556  48.792  35.135  1.00100.00
ATOM   1474  N   PHE A 191       7.502  46.641  41.907  1.00 32.67
ATOM   1475  CA  PHE A 191       8.296  45.679  42.651  1.00 31.95
ATOM   1476  C   PHE A 191       7.784  44.249  42.523  1.00 33.46
ATOM   1477  O   PHE A 191       6.571  43.970  42.462  1.00 32.26
ATOM   1478  CB  PHE A 191       8.182  46.052  44.157  1.00 31.15
ATOM   1479  CG  PHE A 191       8.495  47.505  44.457  1.00 25.52
ATOM   1480  CD1 PHE A 191       9.813  47.930  44.618  1.00 25.46
ATOM   1481  CD2 PHE A 191       7.477  48.447  44.582  1.00 28.24
ATOM   1482  CE1 PHE A 191      10.131  49.261  44.884  1.00 27.83
ATOM   1483  CE2 PHE A 191       7.769  49.786  44.841  1.00 30.83
ATOM   1484  CZ  PHE A 191       9.095  50.188  44.999  1.00 29.60
ATOM   1485  N   ILE A 192       8.732  43.324  42.567  1.00 33.50
ATOM   1486  CA  ILE A 192       8.358  41.918  42.502  1.00 35.54
ATOM   1487  C   ILE A 192       9.089  41.083  43.523  1.00 27.79
ATOM   1488  O   ILE A 192      10.299  41.147  43.644  1.00 26.68
ATOM   1489  CB  ILE A 192       8.521  41.221  41.133  1.00 40.49
ATOM   1490  CG1 ILE A 192       9.982  41.182  40.709  1.00 43.06
ATOM   1491  CG2 ILE A 192       7.753  41.957  40.052  1.00 44.56
ATOM   1492  CD1 ILE A 192      10.729  39.903  41.096  1.00 83.58
ATOM   1493  N   GLN A 193       8.322  40.266  44.204  1.00 29.76
ATOM   1494  CA  GLN A 193       8.903  39.386  45.177  1.00 30.86
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ATOM 1495 C GLN A 193 8.505 37.983 44.831 1.00 28.66
ATOM 1496 O GLN A 193 7.406 37.529 45.181 1.00 27.73
ATOM 1497 CB GLN A 193 8.625 39.729 46.669 1.00 32.91
ATOM 1498 CG GLN A 193 9.339 38.787 47.682 1.00 24.21
ATOM 1499 CD GLN A 193 10.864 38.777 47.631 1.00 20.52
ATOM 1500 OE1 GLN A 193 11.448 37.867 47.031 1.00 28.37
ATOM 1501 NE2 GLN A 193 11.535 39.752 48.272 1.00 21.68
ATOM 1502 N LYS A 194 9.477 37.342 44.163 1.00 30.49
ATOM 1503 CA LYS A 194 9.401 35.950 43.684 1.00 34.51
ATOM 1504 C LYS A 194 9.563 34.882 44.787 1.00 40.98
ATOM 1505 O LYS A 194 9.071 33.753 44.652 1.00 39.86
ATOM 1506 CB LYS A 194 10.319 35.663 42.485 1.00 36.96
ATOM 1507 CG LYS A 194 9.652 35.946 41.148 1.00 60.69
ATOM 1508 CD LYS A 194 10.655 36.201 40.037 1.00 71.49
ATOM 1509 CE LYS A 194 10.024 36.595 38.711 1.00 70.55
ATOM 1510 NZ LYS A 194 11.032 37.075 37.745 1.00 96.02
ATOM 1511 N VAL A 195 10.268 35.201 45.882 1.00 28.85
ATOM 1512 CA VAL A 195 10.383 34.203 46.929 1.00 24.96
ATOM 1513 C VAL A 195 9.195 34.303 47.895 1.00 28.79
ATOM 1514 O VAL A 195 8.820 35.398 48.331 1.00 30.73
ATOM 1515 CB VAL A 195 11.716 34.313 47.649 1.00 28.17
ATOM 1516 CG1 VAL A 195 11.907 33.002 48.380 1.00 31.42
ATOM 1517 CG2 VAL A 195 12.875 34.513 46.672 1.00 26.41
ATOM 1518 N PRO A 196 8.540 33.179 48.222 1.00 23.07
ATOM 1519 CA PRO A 196 7.423 33.248 49.134 1.00 20.29
ATOM 1520 C PRO A 196 7.931 33.653 50.519 1.00 26.98
ATOM 1521 O PRO A 196 8.932 33.121 51.013 1.00 23.36
ATOM 1522 CB PRO A 196 6.769 31.869 49.189 1.00 19.98
ATOM 1523 CG PRO A 196 7.665 30.923 48.414 1.00 24.10
ATOM 1524 CD PRO A 196 8.673 31.798 47.691 1.00 23.37
ATOM 1525 N ILE A 197 7.254 34.639 51.105 1.00 25.17
ATOM 1526 CA ILE A 197 7.642 35.141 52.407 1.00 22.96
ATOM 1527 C ILE A 197 6.431 35.273 53.312 1.00 25.79
ATOM 1528 O ILE A 197 5.281 35.395 52.833 1.00 22.84
ATOM 1529 CB ILE A 197 8.228 36.535 52.230 1.00 23.36
ATOM 1530 CG1 ILE A 197 7.164 37.355 51.526 1.00 25.01
ATOM 1531 CG2 ILE A 197 9.509 36.554 51.399 1.00 21.56
ATOM 1532 CD1 ILE A 197 7.429 38.859 51.634 1.00 22.37
ATOM 1533 N PRO A 198 6.720 35.261 54.633 1.00 20.61
ATOM 1534 CA PRO A 198 5.687 35.453 55.660 1.00 15.95
ATOM 1535 C PRO A 198 5.298 36.916 55.491 1.00 17.92
ATOM 1536 O PRO A 198 6.185 37.687 55.086 1.00 17.98
ATOM 1537 CB PRO A 198 6.399 35.297 57.011 1.00 15.44
ATOM 1538 CG PRO A 198 7.881 35.462 56.704 1.00 18.48
ATOM 1539 CD PRO A 198 8.088 35.164 55.223 1.00 15.86
ATOM 1540 N CYS A 199 4.030 37.325 55.748 1.00 18.80
ATOM 1541 CA CYS A 199 3.646 38.750 55.529 1.00 19.91
ATOM 1542 C CYS A 199 4.363 39.820 56.400 1.00 22.70
ATOM 1543 O CYS A 199 4.392 41.030 56.091 1.00 19.22
ATOM 1544 CB CYS A 199 2.118 38.964 55.554 1.00 17.27
ATOM 1545 SG CYS A 199 1.359 38.495 57.126 1.00 22.02
ATOM 1546 N TYR A 200 4.963 39.375 57.512 1.00 20.55
ATOM 1547 CA TYR A 200 5.652 40.318 58.356 1.00 19.65
ATOM 1548 C TYR A 200 6.894 40.879 57.724 1.00 24.32
ATOM 1549 O TYR A 200 7.493 41.812 58.252 1.00 26.71
ATOM 1550 CB TYR A 200 5.978 39.763 59.731 1.00 17.18
ATOM 1551 CG TYR A 200 7.086 38.751 59.710 1.00 17.72
ATOM 1552 CD1 TYR A 200 8.409 39.169 59.846 1.00 16.87

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ATOM 1553 CD2 TYR A 200 6.802 37.385 59.642 1.00 18.65
ATOM 1554 CE1 TYR A 200 9.432 38.221 59.864 1.00 14.67
ATOM 1555 CE2 TYR A 200 7.822 36.434 59.699 1.00 18.76
ATOM 1556 CZ TYR A 200 9.146 36.855 59.802 1.00 20.42
ATOM 1557 OH TYR A 200 10.169 35.921 59.858 1.00 17.42
ATOM 1558 N LEU A 201 7.280 40.312 56.590 1.00 16.84
ATOM 1559 CA LEU A 201 8.436 40.765 55.864 1.00 14.82
ATOM 1560 C LEU A 201 8.078 41.787 54.785 1.00 24.60
ATOM 1561 O LEU A 201 8.956 42.269 54.044 1.00 22.81
ATOM 1562 CB LEU A 201 9.138 39.532 55.256 1.00 17.56
ATOM 1563 CG LEU A 201 9.910 38.670 56.257 1.00 16.40
ATOM 1564 CD1 LEU A 201 10.674 37.594 55.489 1.00 15.76
ATOM 1565 CD2 LEU A 201 10.900 39.523 57.040 1.00 16.02
ATOM 1566 N ILE A 202 6.761 42.084 54.657 1.00 24.26
ATOM 1567 CA ILE A 202 6.293 43.088 53.698 1.00 20.28
ATOM 1568 C ILE A 202 6.703 44.481 54.226 1.00 25.46
ATOM 1569 O ILE A 202 6.447 44.850 55.393 1.00 26.48
ATOM 1570 CB ILE A 202 4.784 43.015 53.489 1.00 21.23
ATOM 1571 CG1 ILE A 202 4.433 41.851 52.593 1.00 17.03
ATOM 1572 CG2 ILE A 202 4.312 44.312 52.826 1.00 23.71
ATOM 1573 CD1 ILE A 202 2.917 41.692 52.437 1.00 22.39
ATOM 1574 N ALA A 203 7.375 45.252 53.384 1.00 17.97
ATOM 1575 CA ALA A 203 7.860 46.568 53.782 1.00 22.84
ATOM 1576 C ALA A 203 7.849 47.593 52.658 1.00 30.22
ATOM 1577 O ALA A 203 8.125 47.284 51.494 1.00 27.07
ATOM 1578 CB ALA A 203 9.284 46.554 54.360 1.00 20.04
ATOM 1579 N LEU A 204 7.589 48.823 53.117 1.00 25.33
ATOM 1580 CA LEU A 204 7.503 50.022 52.300 1.00 23.92
ATOM 1581 C LEU A 204 8.105 51.242 53.003 1.00 27.30
ATOM 1582 O LEU A 204 8.004 51.419 54.219 1.00 24.19
ATOM 1583 CB LEU A 204 6.008 50.269 51.933 1.00 22.42
ATOM 1584 CG LEU A 204 5.702 51.492 51.036 1.00 24.14
ATOM 1585 CD1 LEU A 204 6.204 51.374 49.593 1.00 17.81
ATOM 1586 CD2 LEU A 204 4.210 51.792 51.073 1.00 26.36
ATOM 1587 N VAL A 205 8.726 52.078 52.178 1.00 26.54
ATOM 1588 CA VAL A 205 9.333 53.346 52.518 1.00 25.64
ATOM 1589 C VAL A 205 9.152 54.299 51.363 1.00 30.84
ATOM 1590 O VAL A 205 9.382 53.955 50.204 1.00 29.34
ATOM 1591 CB VAL A 205 10.827 53.298 52.785 1.00 27.61
ATOM 1592 CG1 VAL A 205 11.551 52.637 51.625 1.00 25.87
ATOM 1593 CG2 VAL A 205 11.359 54.717 53.021 1.00 27.64
ATOM 1594 N VAL A 206 8.763 55.503 51.704 1.00 28.24
ATOM 1595 CA VAL A 206 8.600 56.544 50.709 1.00 27.85
ATOM 1596 C VAL A 206 9.246 57.813 51.206 1.00 30.43
ATOM 1597 O VAL A 206 8.961 58.289 52.320 1.00 31.87
ATOM 1598 CB VAL A 206 7.145 56.882 50.379 1.00 30.77
ATOM 1599 CG1 VAL A 206 7.113 57.870 49.200 1.00 33.19
ATOM 1600 CG2 VAL A 206 6.336 55.620 50.078 1.00 26.71
ATOM 1601 N GLY A 207 10.098 58.357 50.363 1.00 25.40
ATOM 1602 CA GLY A 207 10.706 59.596 50.760 1.00 28.31
ATOM 1603 C GLY A 207 11.654 60.097 49.716 1.00 35.37
ATOM 1604 O GLY A 207 11.688 59.549 48.615 1.00 34.13
ATOM 1605 N ALA A 208 12.414 61.121 50.123 1.00 33.99
ATOM 1606 CA ALA A 208 13.414 61.776 49.290 1.00 35.45
ATOM 1607 C ALA A 208 14.746 61.041 49.360 1.00 38.58
ATOM 1608 O ALA A 208 15.799 61.544 49.784 1.00 39.24
ATOM 1609 CB ALA A 208 13.502 63.268 49.619 1.00 36.08
ATOM 1610 N LEU A 209 14.676 59.796 48.916 1.00 34.99

ATOM 1611 CA LEU A 209 15.821 58.918 48.962 1.00 32.15
ATOM 1612 C LEU A 209 16.730 59.052 47.800 1.00 43.00
ATOM 1613 O LEU A 209 16.298 59.315 46.679 1.00 44.56
ATOM 1614 CB LEU A 209 15.384 57.449 49.000 1.00 30.82
ATOM 1615 CG LEU A 209 14.293 57.238 50.030 1.00 34.48
ATOM 1616 CD1 LEU A 209 13.712 55.840 49.875 1.00 31.95
ATOM 1617 CD2 LEU A 209 14.955 57.428 51.386 1.00 31.78
ATOM 1618 N GLU A 210 17.979 58.795 48.156 1.00 39.96
ATOM 1619 CA GLU A 210 19.130 58.767 47.294 1.00 37.51
ATOM 1620 C GLU A 210 19.802 57.468 47.652 1.00 45.24
ATOM 1621 O GLU A 210 19.520 56.916 48.716 1.00 45.87
ATOM 1622 CB GLU A 210 20.088 59.940 47.570 1.00 39.44
ATOM 1623 CG GLU A 210 19.601 61.256 46.936 1.00 43.88
ATOM 1624 CD GLU A 210 20.679 62.289 46.960 1.00 83.62
ATOM 1625 OE1 GLU A 210 21.851 62.020 47.179 1.00 69.67
ATOM 1626 OE2 GLU A 210 20.217 63.498 46.755 1.00100.00
ATOM 1627 N SER A 211 20.661 56.973 46.774 1.00 39.83
ATOM 1628 CA SER A 211 21.323 55.719 47.046 1.00 39.26
ATOM 1629 C SER A 211 22.763 55.796 46.628 1.00 40.32
ATOM 1630 O SER A 211 23.122 56.657 45.861 1.00 47.20
ATOM 1631 CB SER A 211 20.662 54.587 46.273 1.00 44.16
ATOM 1632 OG SER A 211 20.992 54.685 44.896 1.00 48.01
ATOM 1633 N ARG A 212 23.589 54.915 47.123 1.00 30.46
ATOM 1634 CA ARG A 212 24.981 54.860 46.737 1.00 30.14
ATOM 1635 C ARG A 212 25.200 53.371 46.539 1.00 38.14
ATOM 1636 O ARG A 212 24.617 52.557 47.252 1.00 38.33
ATOM 1637 CB ARG A 212 25.928 55.449 47.785 1.00 36.60
ATOM 1638 CG ARG A 212 26.973 56.473 47.307 1.00 66.52
ATOM 1639 CD ARG A 212 26.437 57.592 46.403 1.00 92.22
ATOM 1640 NE ARG A 212 26.336 58.944 46.974 1.00 88.06
ATOM 1641 CZ ARG A 212 25.429 59.863 46.586 1.00100.00
ATOM 1642 NH1 ARG A 212 24.525 59.616 45.636 1.00 63.09
ATOM 1643 NH2 ARG A 212 25.405 61.069 47.169 1.00100.00
ATOM 1644 N GLN A 213 25.985 52.957 45.570 1.00 34.56
ATOM 1645 CA GLN A 213 26.155 51.533 45.435 1.00 34.71
ATOM 1646 C GLN A 213 27.453 51.142 46.101 1.00 40.21
ATOM 1647 O GLN A 213 28.493 51.737 45.826 1.00 41.35
ATOM 1648 CB GLN A 213 26.081 51.014 44.000 1.00 36.31
ATOM 1649 CG GLN A 213 26.626 49.582 43.946 1.00 49.64
ATOM 1650 CD GLN A 213 26.775 49.077 42.531 1.00 80.06
ATOM 1651 OE1 GLN A 213 26.908 47.861 42.312 1.00 77.10
ATOM 1652 NE2 GLN A 213 26.753 50.012 41.577 1.00 75.51
ATOM 1653 N ILE A 214 27.370 50.166 47.007 1.00 35.56
ATOM 1654 CA ILE A 214 28.531 49.737 47.760 1.00 32.74
ATOM 1655 C ILE A 214 28.947 48.311 47.535 1.00 28.86
ATOM 1656 O ILE A 214 29.917 47.897 48.149 1.00 30.02
ATOM 1657 CB ILE A 214 28.320 49.957 49.262 1.00 39.00
ATOM 1658 CG1 ILE A 214 27.032 49.265 49.733 1.00 40.79
ATOM 1659 CG2 ILE A 214 28.198 51.447 49.566 1.00 39.90
ATOM 1660 CD1 ILE A 214 26.810 49.364 51.247 1.00 39.31
ATOM 1661 N GLY A 215 28.231 47.569 46.691 1.00 29.42
ATOM 1662 CA GLY A 215 28.518 46.166 46.367 1.00 26.41
ATOM 1663 C GLY A 215 27.778 45.743 45.106 1.00 30.00
ATOM 1664 O GLY A 215 26.874 46.447 44.669 1.00 35.16
ATOM 1665 N PRO A 216 28.131 44.608 44.497 1.00 33.24
ATOM 1666 CA PRO A 216 27.459 44.197 43.262 1.00 33.84
ATOM 1667 C PRO A 216 25.979 43.984 43.441 1.00 39.13
ATOM 1668 O PRO A 216 25.241 44.145 42.467 1.00 40.02

ATOM 1669 CB PRO A 216 28.067 42.867 42.793 1.00 34.78
ATOM 1670 CG PRO A 216 29.020 42.415 43.897 1.00 38.44
ATOM 1671 CD PRO A 216 29.116 43.556 44.912 1.00 35.07
ATOM 1672 N ARG A 217 25.578 43.609 44.662 1.00 23.56
ATOM 1673 CA ARG A 217 24.177 43.370 44.909 1.00 21.48
ATOM 1674 C ARG A 217 23.679 44.288 46.015 1.00 30.90
ATOM 1675 O ARG A 217 22.706 44.002 46.713 1.00 27.14
ATOM 1676 CB ARG A 217 23.926 41.920 45.247 1.00 22.22
ATOM 1677 CG ARG A 217 25.122 41.312 45.977 1.00 30.92
ATOM 1678 CD ARG A 217 24.882 39.839 46.242 1.00 25.36
ATOM 1679 NE ARG A 217 26.009 39.174 46.874 1.00 30.74
ATOM 1680 CZ ARG A 217 26.020 37.875 47.141 1.00 32.19
ATOM 1681 NH1 ARG A 217 24.991 37.088 46.838 1.00 29.57
ATOM 1682 NH2 ARG A 217 27.090 37.341 47.732 1.00 42.93
ATOM 1683 N THR A 218 24.354 45.426 46.134 1.00 27.52
ATOM 1684 CA THR A 218 23.979 46.331 47.172 1.00 25.01
ATOM 1685 C THR A 218 24.154 47.813 46.936 1.00 29.25
ATOM 1686 O THR A 218 25.256 48.269 46.674 1.00 32.56
ATOM 1687 CB THR A 218 24.877 46.003 48.388 1.00 30.92
ATOM 1688 OG1 THR A 218 24.591 44.711 48.891 1.00 28.41
ATOM 1689 CG2 THR A 218 24.710 47.060 49.474 1.00 27.73
ATOM 1690 N LEU A 219 23.056 48.543 47.133 1.00 25.49
ATOM 1691 CA LEU A 219 22.997 49.991 47.132 1.00 27.09
ATOM 1692 C LEU A 219 22.572 50.417 48.532 1.00 35.31
ATOM 1693 O LEU A 219 21.748 49.739 49.162 1.00 32.55
ATOM 1694 CB LEU A 219 21.822 50.526 46.319 1.00 29.51
ATOM 1695 CG LEU A 219 22.159 50.812 44.869 1.00 31.54
ATOM 1696 CD1 LEU A 219 23.162 49.773 44.395 1.00 31.76
ATOM 1697 CD2 LEU A 219 20.836 50.658 44.148 1.00 32.31
ATOM 1698 N VAL A 220 23.086 51.549 49.001 1.00 31.15
ATOM 1699 CA VAL A 220 22.715 52.101 50.289 1.00 31.32
ATOM 1700 C VAL A 220 21.720 53.197 50.002 1.00 31.45
ATOM 1701 O VAL A 220 22.004 54.072 49.190 1.00 31.85
ATOM 1702 CB VAL A 220 23.878 52.729 51.089 1.00 39.68
ATOM 1703 CG1 VAL A 220 23.538 52.833 52.574 1.00 37.81
ATOM 1704 CG2 VAL A 220 25.193 51.970 50.965 1.00 42.41
ATOM 1705 N TRP A 221 20.579 53.168 50.665 1.00 28.89
ATOM 1706 CA TRP A 221 19.574 54.197 50.471 1.00 30.76
ATOM 1707 C TRP A 221 19.317 55.010 51.729 1.00 38.31
ATOM 1708 O TRP A 221 19.205 54.446 52.812 1.00 35.62
ATOM 1709 CB TRP A 221 18.240 53.555 50.116 1.00 30.66
ATOM 1710 CG TRP A 221 18.321 52.711 48.896 1.00 34.85
ATOM 1711 CD1 TRP A 221 18.752 51.434 48.798 1.00 37.00
ATOM 1712 CD2 TRP A 221 17.952 53.129 47.584 1.00 36.50
ATOM 1713 NE1 TRP A 221 18.648 51.014 47.501 1.00 35.82
ATOM 1714 CE2 TRP A 221 18.154 52.033 46.737 1.00 39.42
ATOM 1715 CE3 TRP A 221 17.429 54.325 47.067 1.00 36.65
ATOM 1716 CZ2 TRP A 221 17.864 52.123 45.374 1.00 38.93
ATOM 1717 CZ3 TRP A 221 17.124 54.398 45.732 1.00 36.06
ATOM 1718 CH2 TRP A 221 17.353 53.308 44.897 1.00 36.29
ATOM 1719 N SER A 222 19.172 56.319 51.557 1.00 31.91
ATOM 1720 CA SER A 222 18.877 57.235 52.639 1.00 32.45
ATOM 1721 C SER A 222 18.692 58.639 52.086 1.00 40.59
ATOM 1722 O SER A 222 18.918 58.901 50.894 1.00 40.28
ATOM 1723 CB SER A 222 19.941 57.242 53.735 1.00 31.75
ATOM 1724 OG SER A 222 21.077 57.977 53.297 1.00 35.91
ATOM 1725 N GLU A 223 18.277 59.534 52.972 1.00 31.05
ATOM 1726 CA GLU A 223 18.173 60.885 52.539 1.00 28.81

ATOM 1727 C GLU A 223 19.612 61.239 52.186 1.00 38.65
ATOM 1728 O GLU A 223 20.566 60.582 52.608 1.00 34.90
ATOM 1729 CB GLU A 223 17.638 61.815 53.630 1.00 27.66
ATOM 1730 CG GLU A 223 16.099 61.840 53.673 1.00 36.07
ATOM 1731 CD GLU A 223 15.540 62.978 54.497 1.00 57.21
ATOM 1732 OE1 GLU A 223 15.442 64.108 54.071 1.00 40.65
ATOM 1733 OE2 GLU A 223 15.155 62.645 55.711 1.00 38.93
ATOM 1734 N LYS A 224 19.740 62.273 51.372 1.00 39.48
ATOM 1735 CA LYS A 224 20.983 62.809 50.871 1.00 37.65
ATOM 1736 C LYS A 224 22.045 62.999 51.962 1.00 35.43
ATOM 1737 O LYS A 224 23.215 62.614 51.833 1.00 35.56
ATOM 1738 CB LYS A 224 20.645 64.109 50.115 1.00 39.12
ATOM 1739 CG LYS A 224 21.806 64.741 49.359 1.00 73.65
ATOM 1740 CD LYS A 224 21.391 65.942 48.513 1.00100.00
ATOM 1741 CE LYS A 224 21.854 67.295 49.055 1.00100.00
ATOM 1742 NZ LYS A 224 21.228 68.446 48.366 1.00100.00
ATOM 1743 N GLU A 225 21.631 63.614 53.061 1.00 29.04
ATOM 1744 CA GLU A 225 22.503 63.910 54.177 1.00 29.49
ATOM 1745 C GLU A 225 23.114 62.705 54.868 1.00 38.42
ATOM 1746 O GLU A 225 24.074 62.857 55.612 1.00 41.35
ATOM 1747 CB GLU A 225 21.760 64.741 55.223 1.00 32.49
ATOM 1748 CG GLU A 225 20.251 64.516 55.075 1.00 59.17
ATOM 1749 CD GLU A 225 19.687 65.377 53.982 1.00 72.33
ATOM 1750 OE1 GLU A 225 20.013 66.539 53.851 1.00 51.07
ATOM 1751 OE2 GLU A 225 18.840 64.757 53.195 1.00 54.65
ATOM 1752 N GLN A 226 22.575 61.511 54.647 1.00 36.99
ATOM 1753 CA GLN A 226 23.114 60.333 55.307 1.00 33.80
ATOM 1754 C GLN A 226 23.845 59.389 54.379 1.00 32.45
ATOM 1755 O GLN A 226 24.549 58.487 54.812 1.00 29.61
ATOM 1756 CB GLN A 226 21.953 59.585 55.988 1.00 33.92
ATOM 1757 CG GLN A 226 21.625 60.145 57.379 1.00 27.50
ATOM 1758 CD GLN A 226 21.179 61.600 57.359 1.00 47.10
ATOM 1759 OE1 GLN A 226 21.839 62.495 57.933 1.00 40.63
ATOM 1760 NE2 GLN A 226 20.042 61.842 56.717 1.00 26.24
ATOM 1761 N VAL A 227 23.678 59.591 53.084 1.00 33.73
ATOM 1762 CA VAL A 227 24.256 58.708 52.072 1.00 36.03
ATOM 1763 C VAL A 227 25.733 58.366 52.155 1.00 38.24
ATOM 1764 O VAL A 227 26.180 57.209 52.105 1.00 36.89
ATOM 1765 CB VAL A 227 23.935 59.160 50.648 1.00 41.90
ATOM 1766 CG1 VAL A 227 25.168 58.940 49.784 1.00 41.75
ATOM 1767 CG2 VAL A 227 22.767 58.374 50.066 1.00 41.36
ATOM 1768 N GLU A 228 26.504 59.419 52.206 1.00 29.72
ATOM 1769 CA GLU A 228 27.917 59.259 52.217 1.00 29.22
ATOM 1770 C GLU A 228 28.437 58.475 53.393 1.00 34.68
ATOM 1771 O GLU A 228 29.243 57.544 53.266 1.00 34.08
ATOM 1772 CB GLU A 228 28.512 60.665 52.133 1.00 33.75
ATOM 1773 CG GLU A 228 28.603 61.094 50.642 1.00 67.15
ATOM 1774 CD GLU A 228 29.180 60.016 49.748 1.00100.00
ATOM 1775 OE1 GLU A 228 30.366 59.735 49.725 1.00100.00
ATOM 1776 OE2 GLU A 228 28.288 59.395 49.010 1.00 93.51
ATOM 1777 N LYS A 229 27.966 58.893 54.561 1.00 35.63
ATOM 1778 CA LYS A 229 28.363 58.244 55.804 1.00 35.00
ATOM 1779 C LYS A 229 27.866 56.794 55.838 1.00 29.64
ATOM 1780 O LYS A 229 28.543 55.844 56.251 1.00 32.26
ATOM 1781 CB LYS A 229 27.924 59.086 56.995 1.00 40.51
ATOM 1782 CG LYS A 229 28.344 58.551 58.355 1.00 81.35
ATOM 1783 CD LYS A 229 28.898 59.623 59.293 1.00100.00
ATOM 1784 CE LYS A 229 29.377 59.096 60.648 1.00100.00

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ATOM   1785  NZ  LYS A 229      30.083  60.097  61.477  1.00100.00
ATOM   1786  N   SER A 230      26.660  56.593  55.349  1.00 23.52
ATOM   1787  CA  SER A 230      26.178  55.239  55.340  1.00 22.02
ATOM   1788  C   SER A 230      27.057  54.388  54.459  1.00 28.88
ATOM   1789  O   SER A 230      27.446  53.270  54.798  1.00 26.72
ATOM   1790  CB  SER A 230      24.794  55.259  54.768  1.00 24.16
ATOM   1791  OG  SER A 230      23.976  55.991  55.660  1.00 31.92
ATOM   1792  N   ALA A 231      27.338  54.956  53.295  1.00 30.71
ATOM   1793  CA  ALA A 231      28.162  54.287  52.314  1.00 31.57
ATOM   1794  C   ALA A 231      29.460  53.827  52.957  1.00 35.46
ATOM   1795  O   ALA A 231      29.919  52.702  52.752  1.00 38.54
ATOM   1796  CB  ALA A 231      28.363  55.167  51.087  1.00 31.57
ATOM   1797  N   TYR A 232      30.052  54.699  53.773  1.00 32.67
ATOM   1798  CA  TYR A 232      31.271  54.323  54.472  1.00 30.97
ATOM   1799  C   TYR A 232      31.016  53.245  55.541  1.00 31.41
ATOM   1800  O   TYR A 232      31.694  52.206  55.613  1.00 25.59
ATOM   1801  CB  TYR A 232      31.896  55.533  55.199  1.00 31.17
ATOM   1802  CG  TYR A 232      33.004  55.084  56.136  1.00 36.66
ATOM   1803  CD1 TYR A 232      34.306  54.872  55.667  1.00 38.45
ATOM   1804  CD2 TYR A 232      32.744  54.825  57.484  1.00 38.25
ATOM   1805  CE1 TYR A 232      35.336  54.432  56.501  1.00 38.86
ATOM   1806  CE2 TYR A 232      33.761  54.375  58.332  1.00 40.20
ATOM   1807  CZ  TYR A 232      35.054  54.174  57.844  1.00 53.86
ATOM   1808  OH  TYR A 232      36.048  53.741  58.690  1.00 61.49
ATOM   1809  N   GLU A 233      30.031  53.541  56.397  1.00 25.55
ATOM   1810  CA  GLU A 233      29.707  52.671  57.515  1.00 26.18
ATOM   1811  C   GLU A 233      29.512  51.180  57.188  1.00 29.28
ATOM   1812  O   GLU A 233      29.995  50.286  57.894  1.00 24.42
ATOM   1813  CB  GLU A 233      28.552  53.249  58.378  1.00 25.67
ATOM   1814  CG  GLU A 233      28.555  52.694  59.834  1.00 18.89
ATOM   1815  CD  GLU A 233      29.382  53.550  60.760  1.00 26.93
ATOM   1816  OE1 GLU A 233      29.452  54.765  60.620  1.00 27.88
ATOM   1817  OE2 GLU A 233      30.040  52.884  61.693  1.00 24.94
ATOM   1818  N   PHE A 234      28.771  50.928  56.103  1.00 24.06
ATOM   1819  CA  PHE A 234      28.405  49.601  55.690  1.00 21.98
ATOM   1820  C   PHE A 234      29.236  48.989  54.590  1.00 28.86
ATOM   1821  O   PHE A 234      28.824  48.018  53.970  1.00 31.83
ATOM   1822  CB  PHE A 234      26.896  49.559  55.393  1.00 24.08
ATOM   1823  CG  PHE A 234      26.104  50.243  56.504  1.00 26.00
ATOM   1824  CD1 PHE A 234      26.254  49.860  57.840  1.00 25.17
ATOM   1825  CD2 PHE A 234      25.221  51.293  56.243  1.00 24.04
ATOM   1826  CE1 PHE A 234      25.543  50.470  58.875  1.00 22.99
ATOM   1827  CE2 PHE A 234      24.510  51.932  57.263  1.00 27.32
ATOM   1828  CZ  PHE A 234      24.676  51.524  58.588  1.00 21.69
ATOM   1829  N   SER A 235      30.404  49.560  54.355  1.00 26.37
ATOM   1830  CA  SER A 235      31.316  49.070  53.330  1.00 23.42
ATOM   1831  C   SER A 235      31.477  47.546  53.325  1.00 29.66
ATOM   1832  O   SER A 235      31.561  46.923  52.270  1.00 28.78
ATOM   1833  CB  SER A 235      32.649  49.751  53.541  1.00 21.15
ATOM   1834  OG  SER A 235      33.483  48.977  54.386  1.00 30.93
ATOM   1835  N   GLU A 236      31.514  46.917  54.506  1.00 26.42
ATOM   1836  CA  GLU A 236      31.708  45.477  54.600  1.00 24.96
ATOM   1837  C   GLU A 236      30.566  44.562  54.193  1.00 25.09
ATOM   1838  O   GLU A 236      30.719  43.346  54.196  1.00 24.51
ATOM   1839  CB  GLU A 236      32.243  45.007  55.968  1.00 27.28
ATOM   1840  CG  GLU A 236      33.391  45.867  56.539  1.00 29.83
ATOM   1841  CD  GLU A 236      33.396  45.909  58.055  1.00 62.44
ATOM   1842  OE1 GLU A 236      32.410  46.157  58.739  1.00 33.13
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ATOM 1843 OE2 GLU A 236 34.574 45.665 58.572 1.00 45.68
ATOM 1844 N THR A 237 29.428 45.112 53.843 1.00 20.37
ATOM 1845 CA THR A 237 28.298 44.271 53.487 1.00 20.82
ATOM 1846 C THR A 237 28.534 43.130 52.541 1.00 29.25
ATOM 1847 O THR A 237 28.150 42.007 52.817 1.00 32.13
ATOM 1848 CB THR A 237 27.137 45.128 52.989 1.00 27.71
ATOM 1849 OG1 THR A 237 26.840 46.044 54.020 1.00 30.30
ATOM 1850 CG2 THR A 237 25.909 44.303 52.610 1.00 21.64
ATOM 1851 N GLU A 238 29.126 43.411 51.399 1.00 26.94
ATOM 1852 CA GLU A 238 29.306 42.335 50.454 1.00 27.70
ATOM 1853 C GLU A 238 30.150 41.241 51.009 1.00 26.72
ATOM 1854 O GLU A 238 29.896 40.077 50.782 1.00 32.69
ATOM 1855 CB GLU A 238 29.844 42.795 49.088 1.00 28.58
ATOM 1856 CG GLU A 238 30.088 41.593 48.154 1.00 27.86
ATOM 1857 CD GLU A 238 28.859 40.827 47.718 1.00 21.53
ATOM 1858 OE1 GLU A 238 27.709 41.240 47.709 1.00 31.37
ATOM 1859 OE2 GLU A 238 29.193 39.652 47.262 1.00 28.77
ATOM 1860 N SER A 239 31.179 41.605 51.727 1.00 21.43
ATOM 1861 CA SER A 239 32.002 40.540 52.279 1.00 20.35
ATOM 1862 C SER A 239 31.235 39.691 53.270 1.00 27.26
ATOM 1863 O SER A 239 31.524 38.499 53.482 1.00 24.57
ATOM 1864 CB SER A 239 33.268 41.078 52.951 1.00 28.19
ATOM 1865 OG SER A 239 32.986 41.780 54.157 1.00 38.57
ATOM 1866 N MET A 240 30.240 40.330 53.910 1.00 26.94
ATOM 1867 CA MET A 240 29.432 39.610 54.898 1.00 20.31
ATOM 1868 C MET A 240 28.541 38.616 54.210 1.00 17.27
ATOM 1869 O MET A 240 28.413 37.482 54.657 1.00 19.98
ATOM 1870 CB MET A 240 28.609 40.545 55.802 1.00 20.22
ATOM 1871 CG MET A 240 29.543 41.286 56.744 1.00 21.15
ATOM 1872 SD MET A 240 28.696 42.501 57.783 1.00 24.45
ATOM 1873 CE MET A 240 29.842 42.552 59.180 1.00 22.66
ATOM 1874 N LEU A 241 27.958 39.073 53.114 1.00 21.32
ATOM 1875 CA LEU A 241 27.070 38.293 52.255 1.00 24.19
ATOM 1876 C LEU A 241 27.822 37.062 51.812 1.00 27.53
ATOM 1877 O LEU A 241 27.328 35.950 51.882 1.00 29.31
ATOM 1878 CB LEU A 241 26.656 39.080 50.991 1.00 25.13
ATOM 1879 CG LEU A 241 25.493 40.037 51.219 1.00 30.35
ATOM 1880 CD1 LEU A 241 25.400 41.089 50.119 1.00 27.92
ATOM 1881 CD2 LEU A 241 24.213 39.220 51.277 1.00 33.53
ATOM 1882 N LYS A 242 29.060 37.257 51.378 1.00 25.05
ATOM 1883 CA LYS A 242 29.822 36.095 50.972 1.00 23.44
ATOM 1884 C LYS A 242 30.013 35.091 52.100 1.00 24.02
ATOM 1885 O LYS A 242 29.895 33.880 51.889 1.00 20.91
ATOM 1886 CB LYS A 242 31.131 36.414 50.252 1.00 26.75
ATOM 1887 CG LYS A 242 30.946 36.983 48.856 1.00 34.89
ATOM 1888 CD LYS A 242 31.238 38.475 48.764 1.00 72.37
ATOM 1889 CE LYS A 242 32.118 38.849 47.572 1.00 83.37
ATOM 1890 NZ LYS A 242 31.373 39.172 46.343 1.00 63.05
ATOM 1891 N ILE A 243 30.332 35.551 53.319 1.00 21.99
ATOM 1892 CA ILE A 243 30.530 34.589 54.412 1.00 21.52
ATOM 1893 C ILE A 243 29.251 33.777 54.684 1.00 22.96
ATOM 1894 O ILE A 243 29.197 32.554 54.801 1.00 22.71
ATOM 1895 CB ILE A 243 31.058 35.328 55.644 1.00 26.02
ATOM 1896 CG1 ILE A 243 32.372 36.021 55.261 1.00 31.56
ATOM 1897 CG2 ILE A 243 31.313 34.376 56.803 1.00 22.17
ATOM 1898 CD1 ILE A 243 33.036 36.860 56.363 1.00 18.00
ATOM 1899 N ALA A 244 28.166 34.528 54.762 1.00 25.12
ATOM 1900 CA ALA A 244 26.863 33.979 55.015 1.00 23.22

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ATOM   1901  C   ALA A 244      26.500  32.902  53.995  1.00 29.00
ATOM   1902  O   ALA A 244      25.878  31.893  54.323  1.00 28.18
ATOM   1903  CB  ALA A 244      25.901  35.157  55.072  1.00 21.72
ATOM   1904  N   GLU A 245      26.892  33.104  52.731  1.00 27.16
ATOM   1905  CA  GLU A 245      26.581  32.130  51.706  1.00 22.70
ATOM   1906  C   GLU A 245      27.328  30.874  52.001  1.00 25.30
ATOM   1907  O   GLU A 245      26.844  29.762  51.887  1.00 28.85
ATOM   1908  CB  GLU A 245      26.915  32.653  50.315  1.00 22.34
ATOM   1909  CG  GLU A 245      25.838  33.625  49.841  1.00 26.07
ATOM   1910  CD  GLU A 245      26.137  34.180  48.472  1.00 52.41
ATOM   1911  OE1 GLU A 245      27.101  34.897  48.236  1.00 39.38
ATOM   1912  OE2 GLU A 245      25.260  33.798  47.566  1.00 37.85
ATOM   1913  N   ASP A 246      28.540  31.079  52.445  1.00 27.12
ATOM   1914  CA  ASP A 246      29.361  29.946  52.792  1.00 29.38
ATOM   1915  C   ASP A 246      28.782  29.251  53.996  1.00 27.88
ATOM   1916  O   ASP A 246      28.832  28.037  54.170  1.00 23.60
ATOM   1917  CB  ASP A 246      30.857  30.287  53.015  1.00 34.30
ATOM   1918  CG  ASP A 246      31.627  29.070  53.420  1.00 63.22
ATOM   1919  OD1 ASP A 246      31.877  28.135  52.678  1.00 70.56
ATOM   1920  OD2 ASP A 246      31.934  29.082  54.686  1.00 89.74
ATOM   1921  N   LEU A 247      28.191  30.025  54.861  1.00 22.96
ATOM   1922  CA  LEU A 247      27.644  29.333  56.028  1.00 26.75
ATOM   1923  C   LEU A 247      26.274  28.715  55.782  1.00 25.45
ATOM   1924  O   LEU A 247      25.966  27.625  56.268  1.00 26.16
ATOM   1925  CB  LEU A 247      27.522  30.296  57.251  1.00 28.55
ATOM   1926  CG  LEU A 247      28.834  30.551  58.009  1.00 35.08
ATOM   1927  CD1 LEU A 247      30.008  30.474  57.061  1.00 37.19
ATOM   1928  CD2 LEU A 247      28.799  31.948  58.597  1.00 33.92
ATOM   1929  N   GLY A 248      25.401  29.437  55.086  1.00 21.51
ATOM   1930  CA  GLY A 248      24.075  28.880  54.940  1.00 22.31
ATOM   1931  C   GLY A 248      23.729  28.415  53.550  1.00 28.05
ATOM   1932  O   GLY A 248      22.623  27.946  53.306  1.00 27.83
ATOM   1933  N   GLY A 249      24.657  28.534  52.622  1.00 23.33
ATOM   1934  CA  GLY A 249      24.262  28.120  51.289  1.00 21.34
ATOM   1935  C   GLY A 249      23.976  29.381  50.493  1.00 30.63
ATOM   1936  O   GLY A 249      24.178  30.490  50.960  1.00 30.72
ATOM   1937  N   PRO A 250      23.527  29.227  49.262  1.00 37.05
ATOM   1938  CA  PRO A 250      23.264  30.361  48.403  1.00 37.47
ATOM   1939  C   PRO A 250      22.230  31.367  48.883  1.00 35.89
ATOM   1940  O   PRO A 250      21.184  31.002  49.410  1.00 32.74
ATOM   1941  CB  PRO A 250      22.704  29.749  47.114  1.00 41.49
ATOM   1942  CG  PRO A 250      22.260  28.330  47.442  1.00 47.11
ATOM   1943  CD  PRO A 250      22.942  27.959  48.743  1.00 40.92
ATOM   1944  N   TYR A 251      22.533  32.637  48.620  1.00 27.85
ATOM   1945  CA  TYR A 251      21.660  33.756  48.887  1.00 24.11
ATOM   1946  C   TYR A 251      20.665  33.769  47.747  1.00 30.54
ATOM   1947  O   TYR A 251      21.068  34.022  46.622  1.00 36.51
ATOM   1948  CB  TYR A 251      22.482  35.026  48.722  1.00 22.57
ATOM   1949  CG  TYR A 251      21.650  36.243  48.975  1.00 24.77
ATOM   1950  CD1 TYR A 251      21.189  36.479  50.269  1.00 28.27
ATOM   1951  CD2 TYR A 251      21.288  37.118  47.953  1.00 23.82
ATOM   1952  CE1 TYR A 251      20.398  37.589  50.560  1.00 27.52
ATOM   1953  CE2 TYR A 251      20.503  38.239  48.227  1.00 21.46
ATOM   1954  CZ  TYR A 251      20.069  38.471  49.533  1.00 30.19
ATOM   1955  OH  TYR A 251      19.310  39.565  49.839  1.00 26.69
ATOM   1956  N   VAL A 252      19.389  33.528  47.996  1.00 21.77
ATOM   1957  CA  VAL A 252      18.419  33.432  46.922  1.00 22.73
ATOM   1958  C   VAL A 252      17.553  34.632  46.586  1.00 30.33
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ATOM   1959  O   VAL A 252      16.701  34.572  45.683  1.00 31.28
ATOM   1960  CB  VAL A 252      17.477  32.314  47.337  1.00 28.37
ATOM   1961  CG1 VAL A 252      18.252  31.009  47.541  1.00 27.04
ATOM   1962  CG2 VAL A 252      16.639  32.723  48.572  1.00 29.19
ATOM   1963  N   TRP A 253      17.733  35.711  47.324  1.00 24.23
ATOM   1964  CA  TRP A 253      16.883  36.868  47.152  1.00 22.27
ATOM   1965  C   TRP A 253      17.300  37.793  46.041  1.00 27.00
ATOM   1966  O   TRP A 253      16.557  38.683  45.646  1.00 27.03
ATOM   1967  CB  TRP A 253      16.782  37.617  48.482  1.00 20.01
ATOM   1968  CG  TRP A 253      16.465  36.613  49.516  1.00 20.82
ATOM   1969  CD1 TRP A 253      17.322  35.799  50.186  1.00 23.01
ATOM   1970  CD2 TRP A 253      15.137  36.270  49.921  1.00 20.48
ATOM   1971  NE1 TRP A 253      16.601  34.977  51.043  1.00 23.74
ATOM   1972  CE2 TRP A 253      15.254  35.266  50.904  1.00 24.56
ATOM   1973  CE3 TRP A 253      13.882  36.771  49.588  1.00 22.14
ATOM   1974  CZ2 TRP A 253      14.109  34.730  51.517  1.00 23.35
ATOM   1975  CZ3 TRP A 253      12.768  36.257  50.222  1.00 23.92
ATOM   1976  CH2 TRP A 253      12.874  35.239  51.177  1.00 23.31
ATOM   1977  N   GLY A 254      18.501  37.611  45.545  1.00 27.81
ATOM   1978  CA  GLY A 254      18.892  38.465  44.452  1.00 28.22
ATOM   1979  C   GLY A 254      19.621  39.697  44.909  1.00 35.44
ATOM   1980  O   GLY A 254      20.847  39.714  44.874  1.00 43.76
ATOM   1981  N   GLN A 255      18.881  40.732  45.300  1.00 27.98
ATOM   1982  CA  GLN A 255      19.534  41.960  45.744  1.00 27.20
ATOM   1983  C   GLN A 255      19.640  42.000  47.258  1.00 29.51
ATOM   1984  O   GLN A 255      18.806  41.408  47.954  1.00 28.12
ATOM   1985  CB  GLN A 255      18.662  43.159  45.345  1.00 28.02
ATOM   1986  CG  GLN A 255      19.350  44.520  45.558  1.00 45.41
ATOM   1987  CD  GLN A 255      20.484  44.770  44.589  1.00 58.13
ATOM   1988  OE1 GLN A 255      20.911  43.848  43.877  1.00 52.27
ATOM   1989  NE2 GLN A 255      20.982  46.004  44.575  1.00 30.88
ATOM   1990  N   TYR A 256      20.653  42.704  47.744  1.00 27.70
ATOM   1991  CA  TYR A 256      20.809  42.901  49.172  1.00 26.42
ATOM   1992  C   TYR A 256      20.972  44.378  49.406  1.00 21.82
ATOM   1993  O   TYR A 256      22.075  44.858  49.525  1.00 23.87
ATOM   1994  CB  TYR A 256      21.869  42.093  49.955  1.00 27.12
ATOM   1995  CG  TYR A 256      21.726  42.369  51.460  1.00 21.81
ATOM   1996  CD1 TYR A 256      20.740  41.730  52.215  1.00 20.63
ATOM   1997  CD2 TYR A 256      22.547  43.282  52.130  1.00 21.46
ATOM   1998  CE1 TYR A 256      20.573  42.001  53.579  1.00 17.95
ATOM   1999  CE2 TYR A 256      22.405  43.573  53.490  1.00 21.50
ATOM   2000  CZ  TYR A 256      21.412  42.913  54.223  1.00 32.29
ATOM   2001  OH  TYR A 256      21.239  43.150  55.580  1.00 22.78
ATOM   2002  N   ASP A 257      19.880  45.109  49.398  1.00 19.68
ATOM   2003  CA  ASP A 257      20.005  46.529  49.608  1.00 21.07
ATOM   2004  C   ASP A 257      19.808  46.875  51.089  1.00 31.39
ATOM   2005  O   ASP A 257      19.263  46.079  51.872  1.00 27.96
ATOM   2006  CB  ASP A 257      19.010  47.346  48.760  1.00 19.02
ATOM   2007  CG  ASP A 257      19.455  47.592  47.327  1.00 28.98
ATOM   2008  OD1 ASP A 257      20.490  47.136  46.840  1.00 23.83
ATOM   2009  OD2 ASP A 257      18.582  48.312  46.645  1.00 28.76
ATOM   2010  N   LEU A 258      20.251  48.099  51.423  1.00 27.55
ATOM   2011  CA  LEU A 258      20.145  48.669  52.746  1.00 24.78
ATOM   2012  C   LEU A 258      19.434  50.003  52.680  1.00 30.32
ATOM   2013  O   LEU A 258      19.615  50.784  51.732  1.00 31.77
ATOM   2014  CB  LEU A 258      21.511  48.889  53.440  1.00 23.08
ATOM   2015  CG  LEU A 258      22.225  47.626  53.916  1.00 24.93
ATOM   2016  CD1 LEU A 258      23.687  47.922  54.245  1.00 21.22
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ATOM   2017  CD2 LEU A 258      21.538  47.060  55.152  1.00 21.84
ATOM   2018  N   LEU A 259      18.644  50.245  53.726  1.00 23.21
ATOM   2019  CA  LEU A 259      17.936  51.484  53.915  1.00 21.37
ATOM   2020  C   LEU A 259      18.185  52.045  55.330  1.00 27.59
ATOM   2021  O   LEU A 259      17.771  51.432  56.319  1.00 26.86
ATOM   2022  CB  LEU A 259      16.433  51.307  53.702  1.00 18.80
ATOM   2023  CG  LEU A 259      15.667  52.543  54.132  1.00 19.47
ATOM   2024  CD1 LEU A 259      15.857  53.670  53.128  1.00 21.23
ATOM   2025  CD2 LEU A 259      14.192  52.205  54.204  1.00 18.79
ATOM   2026  N   VAL A 260      18.847  53.205  55.408  1.00 21.57
ATOM   2027  CA  VAL A 260      19.111  53.903  56.648  1.00 21.30
ATOM   2028  C   VAL A 260      17.968  54.863  56.866  1.00 30.36
ATOM   2029  O   VAL A 260      17.833  55.881  56.181  1.00 31.96
ATOM   2030  CB  VAL A 260      20.403  54.663  56.563  1.00 24.67
ATOM   2031  CG1 VAL A 260      20.789  55.226  57.929  1.00 22.98
ATOM   2032  CG2 VAL A 260      21.446  53.677  56.074  1.00 26.02
ATOM   2033  N   LEU A 261      17.116  54.507  57.818  1.00 23.24
ATOM   2034  CA  LEU A 261      15.930  55.273  58.105  1.00 19.43
ATOM   2035  C   LEU A 261      16.171  56.472  58.971  1.00 23.79
ATOM   2036  O   LEU A 261      17.278  56.708  59.443  1.00 25.06
ATOM   2037  CB  LEU A 261      14.943  54.367  58.842  1.00 19.66
ATOM   2038  CG  LEU A 261      14.286  53.442  57.827  1.00 28.61
ATOM   2039  CD1 LEU A 261      14.992  52.089  57.734  1.00 28.87
ATOM   2040  CD2 LEU A 261      12.786  53.354  58.044  1.00 37.75
ATOM   2041  N   PRO A 262      15.087  57.203  59.170  1.00 25.75
ATOM   2042  CA  PRO A 262      15.137  58.343  60.051  1.00 27.87
ATOM   2043  C   PRO A 262      15.219  57.793  61.487  1.00 29.99
ATOM   2044  O   PRO A 262      14.875  56.636  61.792  1.00 25.40
ATOM   2045  CB  PRO A 262      13.872  59.168  59.811  1.00 28.11
ATOM   2046  CG  PRO A 262      13.039  58.416  58.792  1.00 29.99
ATOM   2047  CD  PRO A 262      13.722  57.078  58.569  1.00 24.33
ATOM   2048  N   PRO A 263      15.704  58.649  62.378  1.00 27.92
ATOM   2049  CA  PRO A 263      15.950  58.306  63.776  1.00 22.66
ATOM   2050  C   PRO A 263      14.891  57.588  64.585  1.00 21.89
ATOM   2051  O   PRO A 263      15.234  56.802  65.462  1.00 22.12
ATOM   2052  CB  PRO A 263      16.552  59.545  64.448  1.00 23.50
ATOM   2053  CG  PRO A 263      16.866  60.527  63.325  1.00 29.26
ATOM   2054  CD  PRO A 263      16.003  60.104  62.142  1.00 26.83
ATOM   2055  N   SER A 264      13.621  57.862  64.315  1.00 21.95
ATOM   2056  CA  SER A 264      12.531  57.219  65.037  1.00 21.99
ATOM   2057  C   SER A 264      12.344  55.765  64.610  1.00 16.88
ATOM   2058  O   SER A 264      11.457  55.099  65.134  1.00 16.95
ATOM   2059  CB  SER A 264      11.206  57.962  64.947  1.00 26.27
ATOM   2060  OG  SER A 264      10.928  58.148  63.564  1.00 26.00
ATOM   2061  N   PHE A 265      13.154  55.245  63.675  1.00 17.99
ATOM   2062  CA  PHE A 265      12.949  53.832  63.372  1.00 18.59
ATOM   2063  C   PHE A 265      13.104  53.056  64.707  1.00 21.28
ATOM   2064  O   PHE A 265      14.080  53.190  65.453  1.00 17.40
ATOM   2065  CB  PHE A 265      13.961  53.395  62.300  1.00 19.34
ATOM   2066  CG  PHE A 265      13.738  51.955  61.907  1.00 22.24
ATOM   2067  CD1 PHE A 265      12.492  51.545  61.432  1.00 20.61
ATOM   2068  CD2 PHE A 265      14.769  51.016  62.003  1.00 24.16
ATOM   2069  CE1 PHE A 265      12.264  50.221  61.061  1.00 21.03
ATOM   2070  CE2 PHE A 265      14.572  49.687  61.620  1.00 23.73
ATOM   2071  CZ  PHE A 265      13.311  49.300  61.161  1.00 20.97
ATOM   2072  N   PRO A 266      12.126  52.262  65.075  1.00 16.27
ATOM   2073  CA  PRO A 266      12.147  51.558  66.343  1.00 15.83
ATOM   2074  C   PRO A 266      13.168  50.441  66.590  1.00 16.31
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ATOM   2075  O   PRO A 266      13.354  50.045  67.733  1.00 12.99
ATOM   2076  CB  PRO A 266      10.744  50.987  66.520  1.00 15.93
ATOM   2077  CG  PRO A 266      10.017  51.164  65.205  1.00 18.48
ATOM   2078  CD  PRO A 266      10.879  52.008  64.308  1.00 14.04
ATOM   2079  N   TYR A 267      13.785  49.894  65.537  1.00 16.40
ATOM   2080  CA  TYR A 267      14.752  48.813  65.694  1.00 15.75
ATOM   2081  C   TYR A 267      16.131  49.180  65.197  1.00 19.44
ATOM   2082  O   TYR A 267      16.342  50.176  64.499  1.00 18.10
ATOM   2083  CB  TYR A 267      14.269  47.507  65.006  1.00 17.45
ATOM   2084  CG  TYR A 267      12.954  47.043  65.626  1.00 19.30
ATOM   2085  CD1 TYR A 267      12.992  46.238  66.766  1.00 19.19
ATOM   2086  CD2 TYR A 267      11.705  47.435  65.127  1.00 14.85
ATOM   2087  CE1 TYR A 267      11.806  45.817  67.369  1.00 21.05
ATOM   2088  CE2 TYR A 267      10.512  47.032  65.734  1.00  9.78
ATOM   2089  CZ  TYR A 267      10.563  46.208  66.861  1.00 13.87
ATOM   2090  OH  TYR A 267       9.427  45.791  67.529  1.00 15.56
ATOM   2091  N   GLY A 268      17.091  48.353  65.583  1.00 14.17
ATOM   2092  CA  GLY A 268      18.460  48.522  65.122  1.00 15.06
ATOM   2093  C   GLY A 268      18.508  48.085  63.652  1.00 19.31
ATOM   2094  O   GLY A 268      19.152  48.695  62.809  1.00 17.05
ATOM   2095  N   GLY A 269      17.773  47.011  63.360  1.00 18.06
ATOM   2096  CA  GLY A 269      17.688  46.453  62.026  1.00 15.91
ATOM   2097  C   GLY A 269      16.438  45.598  61.892  1.00 16.11
ATOM   2098  O   GLY A 269      15.869  45.183  62.891  1.00 14.41
ATOM   2099  N   MET A 270      16.031  45.376  60.637  1.00 13.94
ATOM   2100  CA  MET A 270      14.868  44.605  60.233  1.00 13.83
ATOM   2101  C   MET A 270      15.162  43.978  58.874  1.00 21.59
ATOM   2102  O   MET A 270      15.310  44.700  57.890  1.00 18.65
ATOM   2103  CB  MET A 270      13.590  45.444  60.058  1.00 16.36
ATOM   2104  CG  MET A 270      12.450  44.562  59.571  1.00 17.70
ATOM   2105  SD  MET A 270      11.946  43.379  60.866  1.00 21.03
ATOM   2106  CE  MET A 270      11.379  41.967  59.867  1.00 19.69
ATOM   2107  N   GLU A 271      15.249  42.647  58.859  1.00 22.89
ATOM   2108  CA  GLU A 271      15.571  41.810  57.700  1.00 18.36
ATOM   2109  C   GLU A 271      14.546  41.835  56.562  1.00 20.73
ATOM   2110  O   GLU A 271      14.238  40.794  55.994  1.00 17.43
ATOM   2111  CB  GLU A 271      15.852  40.352  58.174  1.00 17.49
ATOM   2112  CG  GLU A 271      14.595  39.641  58.706  1.00 14.64
ATOM   2113  CD  GLU A 271      14.297  39.896  60.175  1.00 16.61
ATOM   2114  OE1 GLU A 271      14.592  40.925  60.774  1.00 16.52
ATOM   2115  OE2 GLU A 271      13.660  38.891  60.720  1.00 15.49
ATOM   2116  N   ASN A 272      13.985  42.991  56.218  1.00 16.76
ATOM   2117  CA  ASN A 272      13.022  42.971  55.122  1.00 19.27
ATOM   2118  C   ASN A 272      13.741  42.476  53.880  1.00 17.37
ATOM   2119  O   ASN A 272      14.781  43.005  53.535  1.00 18.02
ATOM   2120  CB  ASN A 272      12.360  44.340  54.873  1.00 21.66
ATOM   2121  CG  ASN A 272      11.711  44.929  56.126  1.00 17.62
ATOM   2122  OD1 ASN A 272      12.045  46.057  56.536  1.00 30.09
ATOM   2123  ND2 ASN A 272      10.846  44.154  56.773  1.00 14.05
ATOM   2124  N   PRO A 273      13.202  41.457  53.238  1.00 16.45
ATOM   2125  CA  PRO A 273      13.855  40.842  52.070  1.00 18.72
ATOM   2126  C   PRO A 273      14.199  41.795  50.934  1.00 25.09
ATOM   2127  O   PRO A 273      13.350  42.525  50.420  1.00 25.34
ATOM   2128  CB  PRO A 273      12.985  39.662  51.608  1.00 17.23
ATOM   2129  CG  PRO A 273      11.682  39.824  52.370  1.00 19.73
ATOM   2130  CD  PRO A 273      11.839  40.918  53.426  1.00 14.09
ATOM   2131  N   CYS A 274      15.475  41.766  50.548  1.00 22.07
ATOM   2132  CA  CYS A 274      16.006  42.590  49.475  1.00 25.86
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ATOM	2133	C	CYS	A	274	16.258	44.014	49.898	1.00 27.30
ATOM	2134	O	CYS	A	274	16.910	44.743	49.142	1.00 25.31
ATOM	2135	CB	CYS	A	274	15.096	42.678	48.220	1.00 28.73
ATOM	2136	SG	CYS	A	274	14.579	41.105	47.493	1.00 31.75
ATOM	2137	N	LEU	A	275	15.729	44.378	51.073	1.00 22.65
ATOM	2138	CA	LEU	A	275	15.850	45.744	51.607	1.00 23.25
ATOM	2139	C	LEU	A	275	15.861	45.771	53.127	1.00 24.49
ATOM	2140	O	LEU	A	275	14.857	46.049	53.766	1.00 20.30
ATOM	2141	CB	LEU	A	275	14.720	46.664	51.076	1.00 21.69
ATOM	2142	CG	LEU	A	275	14.883	48.179	51.233	1.00 23.67
ATOM	2143	CD1	LEU	A	275	16.161	48.676	50.567	1.00 21.04
ATOM	2144	CD2	LEU	A	275	13.678	48.860	50.598	1.00 24.01
ATOM	2145	N	THR	A	276	17.019	45.459	53.693	1.00 23.64
ATOM	2146	CA	THR	A	276	17.168	45.522	55.142	1.00 23.40
ATOM	2147	C	THR	A	276	17.072	46.994	55.594	1.00 24.89
ATOM	2148	O	THR	A	276	17.685	47.911	55.035	1.00 21.17
ATOM	2149	CB	THR	A	276	18.493	44.855	55.596	1.00 27.90
ATOM	2150	OG1	THR	A	276	18.355	43.451	55.661	1.00 27.28
ATOM	2151	CG2	THR	A	276	19.029	45.362	56.936	1.00 23.58
ATOM	2152	N	PHE	A	277	16.247	47.234	56.612	1.00 22.02
ATOM	2153	CA	PHE	A	277	16.088	48.573	57.195	1.00 20.16
ATOM	2154	C	PHE	A	277	17.044	48.709	58.384	1.00 25.70
ATOM	2155	O	PHE	A	277	17.162	47.764	59.167	1.00 21.88
ATOM	2156	CB	PHE	A	277	14.694	48.687	57.829	1.00 18.17
ATOM	2157	CG	PHE	A	277	13.634	48.938	56.817	1.00 19.00
ATOM	2158	CD1	PHE	A	277	13.835	48.531	55.500	1.00 24.17
ATOM	2159	CD2	PHE	A	277	12.427	49.542	57.152	1.00 20.88
ATOM	2160	CE1	PHE	A	277	12.862	48.745	54.525	1.00 23.52
ATOM	2161	CE2	PHE	A	277	11.446	49.770	56.185	1.00 26.94
ATOM	2162	CZ	PHE	A	277	11.659	49.364	54.865	1.00 22.89
ATOM	2163	N	VAL	A	278	17.713	49.843	58.572	1.00 20.87
ATOM	2164	CA	VAL	A	278	18.595	49.962	59.732	1.00 19.42
ATOM	2165	C	VAL	A	278	18.432	51.321	60.375	1.00 23.68
ATOM	2166	O	VAL	A	278	18.086	52.292	59.711	1.00 19.82
ATOM	2167	CB	VAL	A	278	20.094	49.721	59.491	1.00 18.82
ATOM	2168	CG1	VAL	A	278	20.320	48.314	59.001	1.00 19.20
ATOM	2169	CG2	VAL	A	278	20.715	50.743	58.521	1.00 15.74
ATOM	2170	N	THR	A	279	18.751	51.374	61.655	1.00 18.56
ATOM	2171	CA	THR	A	279	18.702	52.616	62.391	1.00 18.24
ATOM	2172	C	THR	A	279	19.889	53.506	61.996	1.00 19.64
ATOM	2173	O	THR	A	279	20.971	53.008	61.740	1.00 19.05
ATOM	2174	CB	THR	A	279	18.821	52.343	63.921	1.00 19.60
ATOM	2175	OG1	THR	A	279	18.895	53.595	64.581	1.00 16.90
ATOM	2176	CG2	THR	A	279	20.120	51.588	64.205	1.00 13.57
ATOM	2177	N	PRO	A	280	19.719	54.836	61.999	1.00 19.21
ATOM	2178	CA	PRO	A	280	20.829	55.707	61.712	1.00 18.61
ATOM	2179	C	PRO	A	280	21.772	55.699	62.912	1.00 21.55
ATOM	2180	O	PRO	A	280	22.918	56.168	62.799	1.00 21.21
ATOM	2181	CB	PRO	A	280	20.267	57.113	61.511	1.00 19.88
ATOM	2182	CG	PRO	A	280	18.901	57.068	62.176	1.00 18.63
ATOM	2183	CD	PRO	A	280	18.448	55.624	62.007	1.00 17.87
ATOM	2184	N	THR	A	281	21.303	55.127	64.044	1.00 20.04
ATOM	2185	CA	THR	A	281	22.174	55.031	65.214	1.00 21.24
ATOM	2186	C	THR	A	281	23.367	54.097	65.002	1.00 22.67
ATOM	2187	O	THR	A	281	24.300	54.031	65.829	1.00 20.18
ATOM	2188	CB	THR	A	281	21.477	54.765	66.547	1.00 24.13
ATOM	2189	OG1	THR	A	281	20.923	53.454	66.562	1.00 21.04
ATOM	2190	CG2	THR	A	281	20.438	55.869	66.750	1.00 20.84

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ATOM   2191  N   LEU A 282      23.342  53.397  63.867  1.00 16.05
ATOM   2192  CA  LEU A 282      24.460  52.528  63.556  1.00 16.95
ATOM   2193  C   LEU A 282      25.644  53.343  63.000  1.00 23.24
ATOM   2194  O   LEU A 282      26.768  52.846  62.861  1.00 21.40
ATOM   2195  CB  LEU A 282      24.087  51.519  62.454  1.00 16.65
ATOM   2196  CG  LEU A 282      23.053  50.463  62.813  1.00 20.67
ATOM   2197  CD1 LEU A 282      23.121  49.359  61.760  1.00 17.37
ATOM   2198  CD2 LEU A 282      23.359  49.877  64.193  1.00 11.35
ATOM   2199  N   LEU A 283      25.410  54.598  62.615  1.00 19.06
ATOM   2200  CA  LEU A 283      26.474  55.379  61.979  1.00 21.46
ATOM   2201  C   LEU A 283      27.530  55.898  62.926  1.00 29.82
ATOM   2202  O   LEU A 283      27.608  57.107  63.129  1.00 30.36
ATOM   2203  CB  LEU A 283      25.861  56.561  61.208  1.00 20.36
ATOM   2204  CG  LEU A 283      24.829  56.070  60.198  1.00 26.22
ATOM   2205  CD1 LEU A 283      24.170  57.268  59.509  1.00 26.75
ATOM   2206  CD2 LEU A 283      25.542  55.174  59.178  1.00 28.22
ATOM   2207  N   ALA A 284      28.307  54.983  63.499  1.00 24.27
ATOM   2208  CA  ALA A 284      29.299  55.346  64.481  1.00 23.44
ATOM   2209  C   ALA A 284      30.519  55.998  63.865  1.00 30.13
ATOM   2210  O   ALA A 284      31.280  56.659  64.566  1.00 28.42
ATOM   2211  CB  ALA A 284      29.683  54.147  65.325  1.00 23.18
ATOM   2212  N   GLY A 285      30.706  55.829  62.561  1.00 26.03
ATOM   2213  CA  GLY A 285      31.852  56.425  61.898  1.00 23.94
ATOM   2214  C   GLY A 285      33.106  55.548  61.857  1.00 35.38
ATOM   2215  O   GLY A 285      34.152  55.934  61.321  1.00 35.31
ATOM   2216  N   ASP A 286      33.010  54.339  62.409  1.00 29.64
ATOM   2217  CA  ASP A 286      34.121  53.427  62.408  1.00 22.48
ATOM   2218  C   ASP A 286      33.702  52.013  62.065  1.00 22.54
ATOM   2219  O   ASP A 286      34.484  51.120  62.321  1.00 20.43
ATOM   2220  CB  ASP A 286      34.798  53.422  63.776  1.00 22.77
ATOM   2221  CG  ASP A 286      33.830  53.000  64.842  1.00 23.72
ATOM   2222  OD1 ASP A 286      32.727  52.571  64.605  1.00 23.69
ATOM   2223  OD2 ASP A 286      34.303  53.119  66.039  1.00 25.35
ATOM   2224  N   LYS A 287      32.483  51.824  61.557  1.00 18.47
ATOM   2225  CA  LYS A 287      31.998  50.498  61.175  1.00 19.69
ATOM   2226  C   LYS A 287      31.839  49.507  62.330  1.00 23.72
ATOM   2227  O   LYS A 287      31.524  48.328  62.143  1.00 23.33
ATOM   2228  CB  LYS A 287      32.928  49.860  60.138  1.00 23.38
ATOM   2229  CG  LYS A 287      33.393  50.760  58.992  1.00 28.89
ATOM   2230  CD  LYS A 287      34.194  49.994  57.933  1.00 29.02
ATOM   2231  CE  LYS A 287      35.016  50.878  56.992  1.00 29.20
ATOM   2232  NZ  LYS A 287      34.225  51.494  55.908  1.00 31.15
ATOM   2233  N   SER A 288      32.090  49.993  63.537  1.00 23.67
ATOM   2234  CA  SER A 288      32.033  49.195  64.756  1.00 21.48
ATOM   2235  C   SER A 288      30.681  48.520  65.080  1.00 24.82
ATOM   2236  O   SER A 288      30.644  47.530  65.833  1.00 23.30
ATOM   2237  CB  SER A 288      32.568  50.021  65.915  1.00 17.62
ATOM   2238  OG  SER A 288      31.613  50.986  66.283  1.00 22.51
ATOM   2239  N   LEU A 289      29.577  49.068  64.546  1.00 17.98
ATOM   2240  CA  LEU A 289      28.235  48.524  64.763  1.00 17.52
ATOM   2241  C   LEU A 289      27.719  47.621  63.632  1.00 25.16
ATOM   2242  O   LEU A 289      26.526  47.300  63.525  1.00 22.82
ATOM   2243  CB  LEU A 289      27.236  49.616  65.156  1.00 15.28
ATOM   2244  CG  LEU A 289      27.741  50.434  66.350  1.00 20.44
ATOM   2245  CD1 LEU A 289      26.607  51.363  66.782  1.00 18.76
ATOM   2246  CD2 LEU A 289      28.151  49.556  67.549  1.00 14.67
ATOM   2247  N   SER A 290      28.649  47.173  62.784  1.00 20.51
ATOM   2248  CA  SER A 290      28.298  46.332  61.655  1.00 22.41
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ATOM 2249 C SER A 290 27.734 44.950 62.011 1.00 24.28
ATOM 2250 O SER A 290 27.186 44.251 61.157 1.00 24.24
ATOM 2251 CB SER A 290 29.457 46.263 60.676 1.00 22.09
ATOM 2252 OG SER A 290 30.484 45.473 61.248 1.00 25.07
ATOM 2253 N ASN A 291 27.873 44.530 63.261 1.00 19.37
ATOM 2254 CA ASN A 291 27.317 43.249 63.591 1.00 18.43
ATOM 2255 C ASN A 291 25.826 43.236 63.256 1.00 17.33
ATOM 2256 O ASN A 291 25.265 42.192 62.964 1.00 14.56
ATOM 2257 CB ASN A 291 27.513 42.937 65.085 1.00 19.46
ATOM 2258 CG ASN A 291 26.602 43.764 65.973 1.00 20.66
ATOM 2259 OD1 ASN A 291 26.798 44.984 66.108 1.00 17.05
ATOM 2260 ND2 ASN A 291 25.549 43.128 66.515 1.00 16.48
ATOM 2261 N VAL A 292 25.177 44.399 63.318 1.00 14.47
ATOM 2262 CA VAL A 292 23.743 44.469 63.064 1.00 13.82
ATOM 2263 C VAL A 292 23.510 44.099 61.629 1.00 21.19
ATOM 2264 O VAL A 292 22.525 43.437 61.257 1.00 19.13
ATOM 2265 CB VAL A 292 23.176 45.855 63.358 1.00 16.20
ATOM 2266 CG1 VAL A 292 21.717 45.989 62.910 1.00 13.99
ATOM 2267 CG2 VAL A 292 23.375 46.193 64.832 1.00 14.21
ATOM 2268 N ILE A 293 24.478 44.519 60.820 1.00 18.72
ATOM 2269 CA ILE A 293 24.388 44.196 59.388 1.00 17.35
ATOM 2270 C ILE A 293 24.537 42.686 59.190 1.00 18.12
ATOM 2271 O ILE A 293 23.706 42.048 58.535 1.00 20.68
ATOM 2272 CB ILE A 293 25.347 45.002 58.504 1.00 21.90
ATOM 2273 CG1 ILE A 293 25.212 46.508 58.732 1.00 22.34
ATOM 2274 CG2 ILE A 293 25.106 44.651 57.036 1.00 24.91
ATOM 2275 CD1 ILE A 293 23.875 47.084 58.267 1.00 17.25
ATOM 2276 N ALA A 294 25.577 42.108 59.809 1.00 14.70
ATOM 2277 CA ALA A 294 25.798 40.674 59.744 1.00 14.92
ATOM 2278 C ALA A 294 24.525 39.915 60.144 1.00 19.80
ATOM 2279 O ALA A 294 24.134 38.879 59.613 1.00 19.51
ATOM 2280 CB ALA A 294 26.963 40.320 60.692 1.00 11.24
ATOM 2281 N HIS A 295 23.858 40.467 61.141 1.00 19.87
ATOM 2282 CA HIS A 295 22.684 39.855 61.718 1.00 17.44
ATOM 2283 C HIS A 295 21.564 39.788 60.725 1.00 15.33
ATOM 2284 O HIS A 295 21.046 38.695 60.487 1.00 15.82
ATOM 2285 CB HIS A 295 22.243 40.560 63.038 1.00 16.85
ATOM 2286 CG HIS A 295 20.982 40.016 63.661 1.00 14.90
ATOM 2287 ND1 HIS A 295 21.029 39.160 64.771 1.00 13.18
ATOM 2288 CD2 HIS A 295 19.681 40.220 63.307 1.00 14.18
ATOM 2289 CE1 HIS A 295 19.763 38.841 65.046 1.00 12.25
ATOM 2290 NE2 HIS A 295 18.926 39.479 64.206 1.00 13.88
ATOM 2291 N GLU A 296 21.201 40.970 60.217 1.00 15.43
ATOM 2292 CA GLU A 296 20.097 41.041 59.253 1.00 16.75
ATOM 2293 C GLU A 296 20.374 40.223 58.006 1.00 19.55
ATOM 2294 O GLU A 296 19.470 39.579 57.471 1.00 19.03
ATOM 2295 CB GLU A 296 19.579 42.442 58.926 1.00 18.78
ATOM 2296 CG GLU A 296 19.319 43.284 60.187 1.00 15.45
ATOM 2297 CD GLU A 296 18.430 42.683 61.258 1.00 15.87
ATOM 2298 OE1 GLU A 296 17.607 41.809 61.045 1.00 18.99
ATOM 2299 OE2 GLU A 296 18.590 43.282 62.423 1.00 16.74
ATOM 2300 N ILE A 297 21.622 40.231 57.561 1.00 14.69
ATOM 2301 CA ILE A 297 22.017 39.411 56.420 1.00 15.42
ATOM 2302 C ILE A 297 21.689 37.950 56.688 1.00 23.32
ATOM 2303 O ILE A 297 21.127 37.216 55.852 1.00 20.13
ATOM 2304 CB ILE A 297 23.518 39.491 56.229 1.00 17.39
ATOM 2305 CG1 ILE A 297 23.800 40.762 55.435 1.00 15.89
ATOM 2306 CG2 ILE A 297 23.998 38.252 55.482 1.00 18.34

ATOM 2307 CD1 ILE A 297 25.286 41.106 55.363 1.00 18.27
ATOM 2308 N SER A 298 22.043 37.525 57.903 1.00 19.20
ATOM 2309 CA SER A 298 21.828 36.138 58.327 1.00 18.22
ATOM 2310 C SER A 298 20.386 35.663 58.269 1.00 17.45
ATOM 2311 O SER A 298 20.138 34.479 58.073 1.00 18.23
ATOM 2312 CB SER A 298 22.415 35.795 59.687 1.00 19.89
ATOM 2313 OG SER A 298 23.812 35.938 59.627 1.00 20.48
ATOM 2314 N HIS A 299 19.458 36.589 58.479 1.00 14.42
ATOM 2315 CA HIS A 299 18.038 36.284 58.435 1.00 14.65
ATOM 2316 C HIS A 299 17.620 35.833 57.031 1.00 19.81
ATOM 2317 O HIS A 299 16.610 35.136 56.857 1.00 22.28
ATOM 2318 CB HIS A 299 17.235 37.515 58.891 1.00 16.87
ATOM 2319 CG HIS A 299 16.952 37.582 60.387 1.00 18.36
ATOM 2320 ND1 HIS A 299 16.386 36.512 61.090 1.00 15.19
ATOM 2321 CD2 HIS A 299 17.138 38.601 61.282 1.00 14.09
ATOM 2322 CE1 HIS A 299 16.235 36.894 62.356 1.00 13.44
ATOM 2323 NE2 HIS A 299 16.671 38.129 62.478 1.00 13.61
ATOM 2324 N SER A 300 18.416 36.216 56.025 1.00 16.24
ATOM 2325 CA SER A 300 18.121 35.813 54.635 1.00 18.63
ATOM 2326 C SER A 300 18.061 34.297 54.485 1.00 22.35
ATOM 2327 O SER A 300 17.696 33.798 53.426 1.00 20.36
ATOM 2328 CB SER A 300 19.092 36.353 53.595 1.00 18.87
ATOM 2329 OG SER A 300 19.383 37.715 53.804 1.00 19.75
ATOM 2330 N TRP A 301 18.469 33.616 55.557 1.00 19.18
ATOM 2331 CA TRP A 301 18.431 32.189 55.676 1.00 21.61
ATOM 2332 C TRP A 301 17.572 31.826 56.889 1.00 23.56
ATOM 2333 O TRP A 301 16.478 31.271 56.777 1.00 23.82
ATOM 2334 CB TRP A 301 19.815 31.539 55.793 1.00 23.04
ATOM 2335 CG TRP A 301 20.658 31.686 54.552 1.00 25.35
ATOM 2336 CD1 TRP A 301 20.855 30.728 53.601 1.00 27.96
ATOM 2337 CD2 TRP A 301 21.462 32.798 54.143 1.00 23.60
ATOM 2338 NE1 TRP A 301 21.694 31.178 52.618 1.00 23.97
ATOM 2339 CE2 TRP A 301 22.097 32.432 52.915 1.00 23.82
ATOM 2340 CE3 TRP A 301 21.688 34.053 54.689 1.00 22.79
ATOM 2341 CZ2 TRP A 301 22.939 33.272 52.216 1.00 22.46
ATOM 2342 CZ3 TRP A 301 22.534 34.892 54.000 1.00 24.82
ATOM 2343 CH2 TRP A 301 23.153 34.502 52.796 1.00 26.57
ATOM 2344 N THR A 302 18.080 32.149 58.074 1.00 19.87
ATOM 2345 CA THR A 302 17.358 31.822 59.285 1.00 20.49
ATOM 2346 C THR A 302 16.294 32.866 59.616 1.00 20.03
ATOM 2347 O THR A 302 16.577 33.805 60.340 1.00 20.36
ATOM 2348 CB THR A 302 18.309 31.537 60.479 1.00 15.81
ATOM 2349 OG1 THR A 302 19.251 32.581 60.555 1.00 17.11
ATOM 2350 CG2 THR A 302 19.047 30.205 60.307 1.00 17.75
ATOM 2351 N GLY A 303 15.080 32.699 59.111 1.00 15.84
ATOM 2352 CA GLY A 303 14.020 33.646 59.409 1.00 13.98
ATOM 2353 C GLY A 303 13.222 33.854 58.145 1.00 16.87
ATOM 2354 O GLY A 303 12.009 33.604 58.075 1.00 18.37
ATOM 2355 N ASN A 304 13.944 34.287 57.138 1.00 15.59
ATOM 2356 CA ASN A 304 13.332 34.542 55.846 1.00 15.84
ATOM 2357 C ASN A 304 13.151 33.277 55.002 1.00 23.11
ATOM 2358 O ASN A 304 12.133 33.172 54.319 1.00 20.28
ATOM 2359 CB ASN A 304 14.075 35.643 55.069 1.00 14.22
ATOM 2360 CG ASN A 304 14.069 36.963 55.803 1.00 28.04
ATOM 2361 OD1 ASN A 304 13.522 37.030 56.927 1.00 21.54
ATOM 2362 ND2 ASN A 304 14.660 37.988 55.159 1.00 15.69
ATOM 2363 N LEU A 305 14.106 32.310 55.061 1.00 22.32
ATOM 2364 CA LEU A 305 13.970 31.036 54.310 1.00 21.16

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ATOM	2365	C	LEU	A	305	13.179	29.990	55.107	1.00	24.14
ATOM	2366	O	LEU	A	305	12.183	29.414	54.657	1.00	20.26
ATOM	2367	CB	LEU	A	305	15.312	30.421	53.877	1.00	20.64
ATOM	2368	CG	LEU	A	305	15.667	30.763	52.443	1.00	25.36
ATOM	2369	CD1	LEU	A	305	17.031	30.163	52.135	1.00	21.74
ATOM	2370	CD2	LEU	A	305	14.601	30.274	51.458	1.00	29.52
ATOM	2371	N	VAL	A	306	13.690	29.750	56.320	1.00	22.11
ATOM	2372	CA	VAL	A	306	13.087	28.894	57.326	1.00	22.78
ATOM	2373	C	VAL	A	306	12.593	29.863	58.387	1.00	20.95
ATOM	2374	O	VAL	A	306	13.360	30.606	59.023	1.00	17.13
ATOM	2375	CB	VAL	A	306	13.972	27.779	57.846	1.00	26.88
ATOM	2376	CG1	VAL	A	306	15.369	28.300	58.012	1.00	30.17
ATOM	2377	CG2	VAL	A	306	13.470	27.219	59.162	1.00	24.85
ATOM	2378	N	THR	A	307	11.268	29.875	58.487	1.00	19.71
ATOM	2379	CA	THR	A	307	10.533	30.800	59.346	1.00	18.22
ATOM	2380	C	THR	A	307	9.839	30.176	60.539	1.00	16.26
ATOM	2381	O	THR	A	307	9.262	29.105	60.437	1.00	12.74
ATOM	2382	CB	THR	A	307	9.463	31.476	58.441	1.00	21.45
ATOM	2383	OG1	THR	A	307	10.078	31.965	57.280	1.00	17.92
ATOM	2384	CG2	THR	A	307	8.739	32.628	59.134	1.00	11.03
ATOM	2385	N	ASN	A	308	9.840	30.870	61.679	1.00	13.09
ATOM	2386	CA	ASN	A	308	9.111	30.345	62.816	1.00	14.06
ATOM	2387	C	ASN	A	308	7.633	30.248	62.421	1.00	16.30
ATOM	2388	O	ASN	A	308	7.041	31.166	61.832	1.00	16.00
ATOM	2389	CB	ASN	A	308	9.277	31.223	64.092	1.00	12.92
ATOM	2390	CG	ASN	A	308	9.213	32.731	63.891	1.00	20.56
ATOM	2391	OD1	ASN	A	308	9.877	33.505	64.593	1.00	19.56
ATOM	2392	ND2	ASN	A	308	8.406	33.206	62.953	1.00	16.07
ATOM	2393	N	LYS	A	309	7.004	29.141	62.729	1.00	15.40
ATOM	2394	CA	LYS	A	309	5.600	28.971	62.366	1.00	15.11
ATOM	2395	C	LYS	A	309	4.607	29.891	63.122	1.00	19.89
ATOM	2396	O	LYS	A	309	3.540	30.305	62.651	1.00	16.39
ATOM	2397	CB	LYS	A	309	5.279	27.493	62.491	1.00	14.57
ATOM	2398	CG	LYS	A	309	3.863	27.208	62.020	1.00	19.79
ATOM	2399	CD	LYS	A	309	3.513	25.738	62.103	1.00	30.87
ATOM	2400	CE	LYS	A	309	3.169	25.135	60.754	1.00	82.87
ATOM	2401	NZ	LYS	A	309	4.126	24.100	60.326	1.00	100.00
ATOM	2402	N	THR	A	310	4.930	30.182	64.367	1.00	15.49
ATOM	2403	CA	THR	A	310	4.165	31.100	65.196	1.00	14.00
ATOM	2404	C	THR	A	310	5.196	31.851	66.038	1.00	21.33
ATOM	2405	O	THR	A	310	6.333	31.382	66.204	1.00	17.08
ATOM	2406	CB	THR	A	310	3.158	30.422	66.130	1.00	23.18
ATOM	2407	OG1	THR	A	310	3.843	29.888	67.272	1.00	17.70
ATOM	2408	CG2	THR	A	310	2.354	29.366	65.357	1.00	24.41
ATOM	2409	N	TRP	A	311	4.797	32.998	66.591	1.00	16.85
ATOM	2410	CA	TRP	A	311	5.703	33.779	67.408	1.00	13.14
ATOM	2411	C	TRP	A	311	6.121	33.074	68.703	1.00	14.85
ATOM	2412	O	TRP	A	311	7.023	33.499	69.408	1.00	16.76
ATOM	2413	CB	TRP	A	311	5.152	35.196	67.620	1.00	11.46
ATOM	2414	CG	TRP	A	311	4.878	35.825	66.301	1.00	12.77
ATOM	2415	CD1	TRP	A	311	3.661	36.134	65.773	1.00	15.35
ATOM	2416	CD2	TRP	A	311	5.867	36.192	65.320	1.00	14.76
ATOM	2417	NE1	TRP	A	311	3.809	36.710	64.528	1.00	15.45
ATOM	2418	CE2	TRP	A	311	5.167	36.734	64.217	1.00	16.76
ATOM	2419	CE3	TRP	A	311	7.265	36.090	65.283	1.00	15.71
ATOM	2420	CZ2	TRP	A	311	5.851	37.203	63.090	1.00	13.67
ATOM	2421	CZ3	TRP	A	311	7.933	36.555	64.180	1.00	16.49
ATOM	2422	CH2	TRP	A	311	7.230	37.101	63.091	1.00	17.12

ATOM 2423 N ASP A 312 5.490 31.969 69.043 1.00 13.30
ATOM 2424 CA ASP A 312 5.895 31.246 70.222 1.00 16.21
ATOM 2425 C ASP A 312 7.274 30.591 70.003 1.00 17.53
ATOM 2426 O ASP A 312 8.008 30.260 70.927 1.00 15.45
ATOM 2427 CB ASP A 312 4.866 30.143 70.538 1.00 17.39
ATOM 2428 CG ASP A 312 3.597 30.710 71.126 1.00 16.83
ATOM 2429 OD1 ASP A 312 3.467 31.852 71.479 1.00 19.29
ATOM 2430 OD2 ASP A 312 2.658 29.837 71.234 1.00 22.09
ATOM 2431 N HIS A 313 7.628 30.392 68.748 1.00 13.40
ATOM 2432 CA HIS A 313 8.881 29.767 68.392 1.00 11.86
ATOM 2433 C HIS A 313 9.855 30.779 67.820 1.00 14.50
ATOM 2434 O HIS A 313 10.768 30.463 67.080 1.00 17.00
ATOM 2435 CB HIS A 313 8.547 28.724 67.308 1.00 14.08
ATOM 2436 CG HIS A 313 7.649 27.679 67.892 1.00 16.09
ATOM 2437 ND1 HIS A 313 8.144 26.653 68.689 1.00 15.85
ATOM 2438 CD2 HIS A 313 6.287 27.557 67.842 1.00 13.64
ATOM 2439 CE1 HIS A 313 7.097 25.922 69.096 1.00 14.23
ATOM 2440 NE2 HIS A 313 5.985 26.458 68.615 1.00 13.52
ATOM 2441 N PHE A 314 9.654 32.022 68.178 1.00 14.17
ATOM 2442 CA PHE A 314 10.435 33.140 67.723 1.00 13.18
ATOM 2443 C PHE A 314 11.910 32.890 67.944 1.00 13.98
ATOM 2444 O PHE A 314 12.775 33.355 67.210 1.00 13.88
ATOM 2445 CB PHE A 314 9.968 34.367 68.516 1.00 11.94
ATOM 2446 CG PHE A 314 10.644 35.668 68.130 1.00 16.32
ATOM 2447 CD1 PHE A 314 10.734 36.090 66.802 1.00 15.58
ATOM 2448 CD2 PHE A 314 11.163 36.510 69.121 1.00 16.22
ATOM 2449 CE1 PHE A 314 11.326 37.314 66.482 1.00 15.39
ATOM 2450 CE2 PHE A 314 11.779 37.727 68.826 1.00 17.56
ATOM 2451 CZ PHE A 314 11.857 38.128 67.490 1.00 16.63
ATOM 2452 N TRP A 315 12.244 32.131 68.950 1.00 11.22
ATOM 2453 CA TRP A 315 13.701 31.921 69.150 1.00 8.85
ATOM 2454 C TRP A 315 14.386 31.236 67.968 1.00 16.46
ATOM 2455 O TRP A 315 15.577 31.416 67.735 1.00 17.37
ATOM 2456 CB TRP A 315 13.968 31.130 70.425 1.00 7.05
ATOM 2457 CG TRP A 315 13.737 29.668 70.223 1.00 11.50
ATOM 2458 CD1 TRP A 315 12.552 28.982 70.289 1.00 14.09
ATOM 2459 CD2 TRP A 315 14.755 28.696 69.909 1.00 14.05
ATOM 2460 NE1 TRP A 315 12.757 27.639 70.053 1.00 14.75
ATOM 2461 CE2 TRP A 315 14.112 27.426 69.829 1.00 19.21
ATOM 2462 CE3 TRP A 315 16.135 28.783 69.668 1.00 14.13
ATOM 2463 CZ2 TRP A 315 14.854 26.239 69.553 1.00 18.59
ATOM 2464 CZ3 TRP A 315 16.848 27.603 69.408 1.00 15.80
ATOM 2465 CH2 TRP A 315 16.225 26.341 69.370 1.00 15.36
ATOM 2466 N LEU A 316 13.665 30.427 67.199 1.00 15.45
ATOM 2467 CA LEU A 316 14.275 29.786 66.039 1.00 15.59
ATOM 2468 C LEU A 316 14.806 30.877 65.102 1.00 19.42
ATOM 2469 O LEU A 316 15.912 30.785 64.558 1.00 18.71
ATOM 2470 CB LEU A 316 13.187 28.974 65.268 1.00 16.46
ATOM 2471 CG LEU A 316 12.679 27.700 65.971 1.00 17.87
ATOM 2472 CD1 LEU A 316 11.619 27.020 65.096 1.00 15.05
ATOM 2473 CD2 LEU A 316 13.812 26.696 66.232 1.00 16.57
ATOM 2474 N ASN A 317 14.004 31.928 64.892 1.00 12.40
ATOM 2475 CA ASN A 317 14.421 33.011 64.034 1.00 12.09
ATOM 2476 C ASN A 317 15.639 33.720 64.594 1.00 19.91
ATOM 2477 O ASN A 317 16.680 33.810 63.968 1.00 20.50
ATOM 2478 CB ASN A 317 13.304 34.073 63.870 1.00 18.56
ATOM 2479 CG ASN A 317 12.331 33.798 62.729 1.00 19.35
ATOM 2480 OD1 ASN A 317 12.028 32.647 62.381 1.00 15.37

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ATOM	2481	ND2	ASN	A	317	11.761	34.856	62.180	1.00	15.57
ATOM	2482	N	GLU	A	318	15.486	34.281	65.789	1.00	15.19
ATOM	2483	CA	GLU	A	318	16.522	35.073	66.433	1.00	11.97
ATOM	2484	C	GLU	A	318	17.754	34.318	66.948	1.00	14.90
ATOM	2485	O	GLU	A	318	18.861	34.762	66.724	1.00	14.03
ATOM	2486	CB	GLU	A	318	15.894	36.023	67.500	1.00	9.48
ATOM	2487	CG	GLU	A	318	14.862	36.983	66.862	1.00	8.24
ATOM	2488	CD	GLU	A	318	15.409	37.898	65.776	1.00	14.75
ATOM	2489	OE1	GLU	A	318	16.597	38.104	65.536	1.00	13.03
ATOM	2490	OE2	GLU	A	318	14.468	38.428	65.046	1.00	13.56
ATOM	2491	N	GLY	A	319	17.586	33.196	67.672	1.00	11.86
ATOM	2492	CA	GLY	A	319	18.740	32.468	68.173	1.00	11.63
ATOM	2493	C	GLY	A	319	19.655	31.995	67.047	1.00	16.47
ATOM	2494	O	GLY	A	319	20.862	32.192	67.142	1.00	16.49
ATOM	2495	N	HIS	A	320	19.118	31.374	65.991	1.00	13.41
ATOM	2496	CA	HIS	A	320	19.963	30.915	64.885	1.00	13.77
ATOM	2497	C	HIS	A	320	20.671	32.086	64.195	1.00	14.09
ATOM	2498	O	HIS	A	320	21.808	32.000	63.739	1.00	17.34
ATOM	2499	CB	HIS	A	320	19.148	30.128	63.832	1.00	12.48
ATOM	2500	CG	HIS	A	320	18.795	28.772	64.335	1.00	16.54
ATOM	2501	ND1	HIS	A	320	17.663	28.555	65.111	1.00	18.54
ATOM	2502	CD2	HIS	A	320	19.459	27.585	64.203	1.00	19.71
ATOM	2503	CE1	HIS	A	320	17.644	27.262	65.413	1.00	17.18
ATOM	2504	NE2	HIS	A	320	18.699	26.647	64.875	1.00	17.83
ATOM	2505	N	THR	A	321	19.952	33.190	64.090	1.00	12.05
ATOM	2506	CA	THR	A	321	20.492	34.376	63.465	1.00	15.46
ATOM	2507	C	THR	A	321	21.669	34.999	64.244	1.00	20.32
ATOM	2508	O	THR	A	321	22.678	35.421	63.665	1.00	17.11
ATOM	2509	CB	THR	A	321	19.406	35.394	63.078	1.00	19.10
ATOM	2510	OG1	THR	A	321	18.517	34.726	62.203	1.00	14.48
ATOM	2511	CG2	THR	A	321	20.089	36.593	62.382	1.00	12.29
ATOM	2512	N	VAL	A	322	21.541	35.047	65.573	1.00	13.35
ATOM	2513	CA	VAL	A	322	22.615	35.545	66.391	1.00	12.65
ATOM	2514	C	VAL	A	322	23.795	34.588	66.234	1.00	16.03
ATOM	2515	O	VAL	A	322	24.959	34.956	66.195	1.00	16.36
ATOM	2516	CB	VAL	A	322	22.149	35.593	67.838	1.00	12.95
ATOM	2517	CG1	VAL	A	322	23.340	35.917	68.744	1.00	12.06
ATOM	2518	CG2	VAL	A	322	21.070	36.690	67.972	1.00	11.64
ATOM	2519	N	TYR	A	323	23.484	33.319	66.107	1.00	12.22
ATOM	2520	CA	TYR	A	323	24.543	32.350	65.974	1.00	10.51
ATOM	2521	C	TYR	A	323	25.297	32.597	64.670	1.00	15.55
ATOM	2522	O	TYR	A	323	26.534	32.680	64.604	1.00	15.83
ATOM	2523	CB	TYR	A	323	23.955	30.941	66.161	1.00	12.86
ATOM	2524	CG	TYR	A	323	25.002	29.841	66.078	1.00	16.99
ATOM	2525	CD1	TYR	A	323	25.666	29.350	67.208	1.00	18.18
ATOM	2526	CD2	TYR	A	323	25.323	29.291	64.834	1.00	21.03
ATOM	2527	CE1	TYR	A	323	26.610	28.319	67.112	1.00	15.16
ATOM	2528	CE2	TYR	A	323	26.266	28.268	64.707	1.00	20.54
ATOM	2529	CZ	TYR	A	323	26.902	27.789	65.853	1.00	19.73
ATOM	2530	OH	TYR	A	323	27.875	26.842	65.715	1.00	18.13
ATOM	2531	N	LEU	A	324	24.547	32.768	63.593	1.00	12.82
ATOM	2532	CA	LEU	A	324	25.216	33.034	62.335	1.00	15.52
ATOM	2533	C	LEU	A	324	26.008	34.346	62.366	1.00	22.74
ATOM	2534	O	LEU	A	324	27.160	34.471	61.935	1.00	22.72
ATOM	2535	CB	LEU	A	324	24.225	33.012	61.148	1.00	14.70
ATOM	2536	CG	LEU	A	324	23.724	31.586	60.863	1.00	18.25
ATOM	2537	CD1	LEU	A	324	22.608	31.574	59.808	1.00	17.22
ATOM	2538	CD2	LEU	A	324	24.905	30.704	60.448	1.00	23.48

ATOM 2539 N GLU A 325 25.332 35.361 62.859 1.00 15.47
ATOM 2540 CA GLU A 325 25.885 36.694 63.007 1.00 13.65
ATOM 2541 C GLU A 325 27.246 36.636 63.628 1.00 16.34
ATOM 2542 O GLU A 325 28.168 37.246 63.123 1.00 15.36
ATOM 2543 CB GLU A 325 24.988 37.464 63.996 1.00 16.31
ATOM 2544 CG GLU A 325 25.472 38.890 64.363 1.00 20.54
ATOM 2545 CD GLU A 325 24.743 39.395 65.599 1.00 30.10
ATOM 2546 OE1 GLU A 325 23.641 39.008 65.966 1.00 18.40
ATOM 2547 OE2 GLU A 325 25.421 40.260 66.301 1.00 21.65
ATOM 2548 N ARG A 326 27.329 35.892 64.727 1.00 15.29
ATOM 2549 CA ARG A 326 28.565 35.781 65.469 1.00 14.94
ATOM 2550 C ARG A 326 29.651 35.048 64.718 1.00 18.22
ATOM 2551 O ARG A 326 30.828 35.316 64.914 1.00 16.55
ATOM 2552 CB ARG A 326 28.367 35.352 66.915 1.00 15.15
ATOM 2553 CG ARG A 326 27.548 36.410 67.619 1.00 11.35
ATOM 2554 CD ARG A 326 27.266 36.102 69.095 1.00 11.37
ATOM 2555 NE ARG A 326 26.619 37.266 69.724 1.00 14.76
ATOM 2556 CZ ARG A 326 25.805 37.229 70.769 1.00 16.13
ATOM 2557 NH1 ARG A 326 25.523 36.107 71.419 1.00 8.40
ATOM 2558 NH2 ARG A 326 25.262 38.379 71.166 1.00 16.43
ATOM 2559 N HIS A 327 29.233 34.146 63.843 1.00 17.38
ATOM 2560 CA HIS A 327 30.174 33.400 63.018 1.00 19.62
ATOM 2561 C HIS A 327 30.700 34.341 61.938 1.00 18.88
ATOM 2562 O HIS A 327 31.866 34.359 61.573 1.00 19.41
ATOM 2563 CB HIS A 327 29.485 32.146 62.407 1.00 17.97
ATOM 2564 CG HIS A 327 29.698 30.875 63.188 1.00 19.10
ATOM 2565 ND1 HIS A 327 30.973 30.414 63.524 1.00 20.08
ATOM 2566 CD2 HIS A 327 28.792 29.954 63.642 1.00 18.16
ATOM 2567 CE1 HIS A 327 30.824 29.266 64.188 1.00 18.80
ATOM 2568 NE2 HIS A 327 29.519 28.976 64.284 1.00 19.69
ATOM 2569 N ILE A 328 29.827 35.168 61.391 1.00 14.60
ATOM 2570 CA ILE A 328 30.304 36.097 60.362 1.00 15.76
ATOM 2571 C ILE A 328 31.423 36.971 60.935 1.00 28.02
ATOM 2572 O ILE A 328 32.504 37.099 60.355 1.00 26.14
ATOM 2573 CB ILE A 328 29.145 36.946 59.788 1.00 16.17
ATOM 2574 CG1 ILE A 328 28.220 36.087 58.911 1.00 19.03
ATOM 2575 CG2 ILE A 328 29.642 38.126 58.968 1.00 18.66
ATOM 2576 CD1 ILE A 328 26.852 36.718 58.595 1.00 14.57
ATOM 2577 N CYS A 329 31.139 37.562 62.116 1.00 21.94
ATOM 2578 CA CYS A 329 32.040 38.433 62.826 1.00 19.84
ATOM 2579 C CYS A 329 33.306 37.718 63.233 1.00 20.23
ATOM 2580 O CYS A 329 34.391 38.278 63.154 1.00 21.18
ATOM 2581 CB CYS A 329 31.309 39.092 64.007 1.00 26.30
ATOM 2582 SG CYS A 329 30.024 40.241 63.391 1.00 33.21
ATOM 2583 N GLY A 330 33.169 36.480 63.655 1.00 17.16
ATOM 2584 CA GLY A 330 34.314 35.683 64.039 1.00 17.88
ATOM 2585 C GLY A 330 35.160 35.471 62.786 1.00 23.13
ATOM 2586 O GLY A 330 36.381 35.479 62.773 1.00 19.20
ATOM 2587 N ARG A 331 34.494 35.297 61.673 1.00 23.41
ATOM 2588 CA ARG A 331 35.238 35.107 60.454 1.00 25.42
ATOM 2589 C ARG A 331 35.949 36.374 60.013 1.00 27.08
ATOM 2590 O ARG A 331 37.066 36.354 59.519 1.00 30.59
ATOM 2591 CB ARG A 331 34.323 34.671 59.328 1.00 29.56
ATOM 2592 CG ARG A 331 34.103 33.178 59.357 1.00 42.38
ATOM 2593 CD ARG A 331 34.542 32.499 58.075 1.00 45.62
ATOM 2594 NE ARG A 331 33.755 31.307 57.851 1.00 59.13
ATOM 2595 CZ ARG A 331 33.469 30.431 58.821 1.00 84.69
ATOM 2596 NH1 ARG A 331 33.882 30.552 60.089 1.00 53.45

ATOM	2597	NH2	ARG	A	331	32.744	29.367	58.501	1.00	89.38
ATOM	2598	N	LEU	A	332	35.309	37.506	60.144	1.00	18.29
ATOM	2599	CA	LEU	A	332	35.960	38.699	59.689	1.00	18.18
ATOM	2600	C	LEU	A	332	36.972	39.217	60.683	1.00	27.48
ATOM	2601	O	LEU	A	332	37.943	39.809	60.248	1.00	26.78
ATOM	2602	CB	LEU	A	332	34.892	39.790	59.583	1.00	20.70
ATOM	2603	CG	LEU	A	332	34.604	40.445	58.237	1.00	29.09
ATOM	2604	CD1	LEU	A	332	34.898	39.569	57.036	1.00	26.07
ATOM	2605	CD2	LEU	A	332	33.138	40.831	58.200	1.00	29.25
ATOM	2606	N	PHE	A	333	36.721	39.049	61.995	1.00	21.64
ATOM	2607	CA	PHE	A	333	37.570	39.583	63.050	1.00	20.45
ATOM	2608	C	PHE	A	333	38.248	38.620	63.966	1.00	21.67
ATOM	2609	O	PHE	A	333	39.050	39.031	64.794	1.00	27.38
ATOM	2610	CB	PHE	A	333	36.882	40.672	63.907	1.00	23.81
ATOM	2611	CG	PHE	A	333	36.150	41.625	62.994	1.00	25.90
ATOM	2612	CD1	PHE	A	333	36.871	42.470	62.151	1.00	27.97
ATOM	2613	CD2	PHE	A	333	34.757	41.624	62.931	1.00	27.62
ATOM	2614	CE1	PHE	A	333	36.198	43.314	61.269	1.00	30.62
ATOM	2615	CE2	PHE	A	333	34.069	42.462	62.053	1.00	32.30
ATOM	2616	CZ	PHE	A	333	34.804	43.309	61.221	1.00	30.11
ATOM	2617	N	GLY	A	334	37.950	37.362	63.877	1.00	17.26
ATOM	2618	CA	GLY	A	334	38.653	36.481	64.791	1.00	18.41
ATOM	2619	C	GLY	A	334	37.735	35.732	65.735	1.00	23.30
ATOM	2620	O	GLY	A	334	36.758	36.276	66.244	1.00	21.87
ATOM	2621	N	GLU	A	335	38.100	34.471	65.947	1.00	18.34
ATOM	2622	CA	GLU	A	335	37.377	33.558	66.821	1.00	20.82
ATOM	2623	C	GLU	A	335	37.301	34.102	68.238	1.00	20.81
ATOM	2624	O	GLU	A	335	36.341	33.888	68.975	1.00	20.60
ATOM	2625	CB	GLU	A	335	38.057	32.183	66.811	1.00	19.30
ATOM	2626	CG	GLU	A	335	37.366	31.179	67.751	1.00	22.22
ATOM	2627	CD	GLU	A	335	35.963	30.786	67.350	1.00	22.99
ATOM	2628	OE1	GLU	A	335	35.278	31.338	66.513	1.00	26.34
ATOM	2629	OE2	GLU	A	335	35.554	29.762	68.020	1.00	20.74
ATOM	2630	N	LYS	A	336	38.327	34.845	68.615	1.00	17.24
ATOM	2631	CA	LYS	A	336	38.375	35.413	69.947	1.00	16.83
ATOM	2632	C	LYS	A	336	37.316	36.470	70.050	1.00	17.51
ATOM	2633	O	LYS	A	336	36.732	36.668	71.110	1.00	17.26
ATOM	2634	CB	LYS	A	336	39.735	36.002	70.264	1.00	16.58
ATOM	2635	CG	LYS	A	336	40.725	34.912	70.659	1.00	20.77
ATOM	2636	CD	LYS	A	336	42.162	35.378	70.871	1.00	32.80
ATOM	2637	CE	LYS	A	336	43.184	34.329	70.432	1.00	66.91
ATOM	2638	NZ	LYS	A	336	44.484	34.418	71.112	1.00	80.02
ATOM	2639	N	PHE	A	337	37.094	37.146	68.927	1.00	11.07
ATOM	2640	CA	PHE	A	337	36.075	38.183	68.893	1.00	13.51
ATOM	2641	C	PHE	A	337	34.691	37.519	68.993	1.00	18.73
ATOM	2642	O	PHE	A	337	33.797	37.992	69.659	1.00	15.94
ATOM	2643	CB	PHE	A	337	36.113	38.963	67.569	1.00	14.14
ATOM	2644	CG	PHE	A	337	35.241	40.194	67.632	1.00	19.04
ATOM	2645	CD1	PHE	A	337	35.266	41.054	68.734	1.00	23.19
ATOM	2646	CD2	PHE	A	337	34.406	40.562	66.571	1.00	25.81
ATOM	2647	CE1	PHE	A	337	34.473	42.209	68.789	1.00	26.28
ATOM	2648	CE2	PHE	A	337	33.634	41.727	66.594	1.00	26.38
ATOM	2649	CZ	PHE	A	337	33.645	42.557	67.718	1.00	25.06
ATOM	2650	N	ARG	A	338	34.501	36.384	68.327	1.00	16.12
ATOM	2651	CA	ARG	A	338	33.239	35.665	68.384	1.00	15.03
ATOM	2652	C	ARG	A	338	32.936	35.314	69.804	1.00	18.17
ATOM	2653	O	ARG	A	338	31.806	35.480	70.240	1.00	18.12
ATOM	2654	CB	ARG	A	338	33.294	34.359	67.617	1.00	11.66

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ATOM   2655  CG  ARG A 338      31.961  33.629  67.660  1.00 12.35
ATOM   2656  CD  ARG A 338      31.899  32.552  66.583  1.00 17.19
ATOM   2657  NE  ARG A 338      32.554  31.328  67.051  1.00 17.53
ATOM   2658  CZ  ARG A 338      31.981  30.175  67.417  1.00 23.05
ATOM   2659  NH1 ARG A 338      30.670  29.953  67.424  1.00 16.55
ATOM   2660  NH2 ARG A 338      32.772  29.179  67.803  1.00 12.25
ATOM   2661  N   HIS A 339      33.956  34.816  70.504  1.00 12.76
ATOM   2662  CA  HIS A 339      33.772  34.426  71.888  1.00 13.75
ATOM   2663  C   HIS A 339      33.408  35.617  72.756  1.00 18.91
ATOM   2664  O   HIS A 339      32.587  35.520  73.655  1.00 12.72
ATOM   2665  CB  HIS A 339      35.006  33.697  72.480  1.00 14.46
ATOM   2666  CG  HIS A 339      34.975  32.250  72.096  1.00 14.96
ATOM   2667  ND1 HIS A 339      34.952  31.249  73.046  1.00 15.14
ATOM   2668  CD2 HIS A 339      34.943  31.693  70.855  1.00 15.02
ATOM   2669  CE1 HIS A 339      34.914  30.101  72.405  1.00 12.56
ATOM   2670  NE2 HIS A 339      34.895  30.343  71.097  1.00 15.39
ATOM   2671  N   PHE A 340      34.066  36.739  72.487  1.00 16.25
ATOM   2672  CA  PHE A 340      33.832  37.961  73.250  1.00 13.96
ATOM   2673  C   PHE A 340      32.361  38.397  73.164  1.00 16.27
ATOM   2674  O   PHE A 340      31.700  38.760  74.158  1.00 13.82
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DEPOSITED - DO NOT SCAN

ATOM	2675	CB	PHE	A	340	34.823	39.032	72.753	1.00	11.82
ATOM	2676	CG	PHE	A	340	34.525	40.414	73.286	1.00	14.06
ATOM	2677	CD1	PHE	A	340	35.064	40.835	74.503	1.00	13.72
ATOM	2678	CD2	PHE	A	340	33.703	41.284	72.566	1.00	16.13
ATOM	2679	CE1	PHE	A	340	34.753	42.091	75.016	1.00	8.85
ATOM	2680	CE2	PHE	A	340	33.401	42.560	73.044	1.00	16.77
ATOM	2681	CZ	PHE	A	340	33.937	42.946	74.273	1.00	11.27
ATOM	2682	N	ASN	A	341	31.871	38.363	71.925	1.00	13.64
ATOM	2683	CA	ASN	A	341	30.507	38.730	71.637	1.00	15.75
ATOM	2684	C	ASN	A	341	29.529	37.762	72.257	1.00	18.72
ATOM	2685	O	ASN	A	341	28.446	38.129	72.717	1.00	19.01
ATOM	2686	CB	ASN	A	341	30.256	38.827	70.136	1.00	15.22
ATOM	2687	CG	ASN	A	341	30.886	40.099	69.603	1.00	29.77
ATOM	2688	OD1	ASN	A	341	31.197	40.172	68.416	1.00	60.07
ATOM	2689	ND2	ASN	A	341	30.995	41.133	70.437	1.00	17.13
ATOM	2690	N	ALA	A	342	29.908	36.511	72.229	1.00	11.92
ATOM	2691	CA	ALA	A	342	29.065	35.487	72.804	1.00	12.85
ATOM	2692	C	ALA	A	342	28.923	35.676	74.314	1.00	15.91
ATOM	2693	O	ALA	A	342	27.832	35.578	74.884	1.00	14.84
ATOM	2694	CB	ALA	A	342	29.614	34.099	72.492	1.00	12.26
ATOM	2695	N	LEU	A	343	30.043	35.937	74.986	1.00	13.24
ATOM	2696	CA	LEU	A	343	30.030	36.113	76.417	1.00	10.68
ATOM	2697	C	LEU	A	343	29.264	37.372	76.748	1.00	14.78
ATOM	2698	O	LEU	A	343	28.551	37.413	77.737	1.00	18.40
ATOM	2699	CB	LEU	A	343	31.459	36.148	77.006	1.00	9.64
ATOM	2700	CG	LEU	A	343	31.476	36.187	78.528	1.00	14.79
ATOM	2701	CD1	LEU	A	343	30.680	35.010	79.105	1.00	11.42
ATOM	2702	CD2	LEU	A	343	32.931	36.014	78.992	1.00	14.08
ATOM	2703	N	GLY	A	344	29.420	38.440	75.953	1.00	10.89
ATOM	2704	CA	GLY	A	344	28.648	39.658	76.253	1.00	10.09
ATOM	2705	C	GLY	A	344	27.124	39.384	76.115	1.00	17.65
ATOM	2706	O	GLY	A	344	26.321	39.969	76.838	1.00	17.82
ATOM	2707	N	GLY	A	345	26.706	38.516	75.167	1.00	13.70
ATOM	2708	CA	GLY	A	345	25.298	38.162	74.927	1.00	8.39
ATOM	2709	C	GLY	A	345	24.753	37.490	76.190	1.00	13.97
ATOM	2710	O	GLY	A	345	23.611	37.741	76.620	1.00	12.61
ATOM	2711	N	TRP	A	346	25.592	36.634	76.814	1.00	13.97
ATOM	2712	CA	TRP	A	346	25.230	35.929	78.059	1.00	9.72
ATOM	2713	C	TRP	A	346	24.922	37.005	79.095	1.00	15.65
ATOM	2714	O	TRP	A	346	23.975	36.947	79.906	1.00	12.16
ATOM	2715	CB	TRP	A	346	26.367	34.981	78.555	1.00	8.14
ATOM	2716	CG	TRP	A	346	25.958	34.282	79.835	1.00	10.60
ATOM	2717	CD1	TRP	A	346	26.106	34.787	81.102	1.00	12.86
ATOM	2718	CD2	TRP	A	346	25.267	33.009	80.004	1.00	11.80
ATOM	2719	NE1	TRP	A	346	25.585	33.926	82.032	1.00	13.12
ATOM	2720	CE2	TRP	A	346	25.065	32.806	81.394	1.00	16.02
ATOM	2721	CE3	TRP	A	346	24.806	32.001	79.140	1.00	14.58
ATOM	2722	CZ2	TRP	A	346	24.431	31.641	81.909	1.00	14.92
ATOM	2723	CZ3	TRP	A	346	24.188	30.860	79.646	1.00	14.14
ATOM	2724	CH2	TRP	A	346	23.982	30.685	81.027	1.00	14.57
ATOM	2725	N	GLY	A	347	25.728	38.064	79.012	1.00	10.25
ATOM	2726	CA	GLY	A	347	25.516	39.160	79.953	1.00	11.27
ATOM	2727	C	GLY	A	347	24.171	39.838	79.758	1.00	11.91
ATOM	2728	O	GLY	A	347	23.531	40.217	80.724	1.00	12.39
ATOM	2729	N	GLU	A	348	23.789	40.049	78.500	1.00	13.80
ATOM	2730	CA	GLU	A	348	22.502	40.674	78.185	1.00	11.62
ATOM	2731	C	GLU	A	348	21.399	39.762	78.682	1.00	16.45
ATOM	2732	O	GLU	A	348	20.381	40.234	79.211	1.00	14.72
ATOM	2733	CB	GLU	A	348	22.401	40.992	76.683	1.00	11.49
ATOM	2734	CG	GLU	A	348	23.434	42.056	76.317	1.00	12.72
ATOM	2735	CD	GLU	A	348	23.027	43.349	76.970	1.00	29.34

ATOM	2736	OE1	GLU	A	348	21.910	43.796	76.855	1.00	45.66
ATOM	2737	OE2	GLU	A	348	23.939	43.872	77.746	1.00	21.11
ATOM	2738	N	LEU	A	349	21.648	38.442	78.531	1.00	11.46
ATOM	2739	CA	LEU	A	349	20.686	37.471	79.030	1.00	12.33
ATOM	2740	C	LEU	A	349	20.538	37.591	80.565	1.00	17.72
ATOM	2741	O	LEU	A	349	19.438	37.548	81.111	1.00	13.76
ATOM	2742	CB	LEU	A	349	21.011	36.014	78.591	1.00	12.25
ATOM	2743	CG	LEU	A	349	20.011	34.943	79.079	1.00	13.43
ATOM	2744	CD1	LEU	A	349	18.665	35.153	78.379	1.00	9.66
ATOM	2745	CD2	LEU	A	349	20.532	33.546	78.712	1.00	13.00
ATOM	2746	N	GLN	A	350	21.631	37.719	81.301	1.00	12.48
ATOM	2747	CA	GLN	A	350	21.524	37.864	82.738	1.00	8.81
ATOM	2748	C	GLN	A	350	20.685	39.085	83.083	1.00	15.50
ATOM	2749	O	GLN	A	350	19.876	39.083	84.015	1.00	18.35
ATOM	2750	CB	GLN	A	350	22.929	38.135	83.300	1.00	12.42
ATOM	2751	CG	GLN	A	350	23.810	36.867	83.324	1.00	13.26
ATOM	2752	CD	GLN	A	350	25.238	37.162	83.789	1.00	25.25
ATOM	2753	OE1	GLN	A	350	25.856	36.393	84.540	1.00	24.47
ATOM	2754	NE2	GLN	A	350	25.770	38.303	83.383	1.00	17.04
ATOM	2755	N	ASN	A	351	20.856	40.155	82.316	1.00	15.07
ATOM	2756	CA	ASN	A	351	20.111	41.382	82.543	1.00	13.40
ATOM	2757	C	ASN	A	351	18.641	41.166	82.291	1.00	15.52
ATOM	2758	O	ASN	A	351	17.800	41.602	83.072	1.00	14.93
ATOM	2759	CB	ASN	A	351	20.581	42.551	81.657	1.00	15.98
ATOM	2760	CG	ASN	A	351	21.996	42.987	81.972	1.00	10.13
ATOM	2761	OD1	ASN	A	351	22.615	42.513	82.928	1.00	16.52
ATOM	2762	ND2	ASN	A	351	22.563	43.766	81.065	1.00	12.55
ATOM	2763	N	SER	A	352	18.310	40.514	81.187	1.00	11.92
ATOM	2764	CA	SER	A	352	16.888	40.272	80.893	1.00	12.49
ATOM	2765	C	SER	A	352	16.167	39.437	81.959	1.00	16.90
ATOM	2766	O	SER	A	352	15.015	39.650	82.332	1.00	15.33
ATOM	2767	CB	SER	A	352	16.772	39.519	79.567	1.00	17.32
ATOM	2768	OG	SER	A	352	16.959	40.434	78.526	1.00	24.23
ATOM	2769	N	VAL	A	353	16.861	38.419	82.432	1.00	14.57
ATOM	2770	CA	VAL	A	353	16.321	37.538	83.446	1.00	13.92
ATOM	2771	C	VAL	A	353	16.163	38.312	84.734	1.00	20.86
ATOM	2772	O	VAL	A	353	15.191	38.139	85.468	1.00	17.05
ATOM	2773	CB	VAL	A	353	17.158	36.280	83.664	1.00	11.73
ATOM	2774	CG1	VAL	A	353	16.794	35.472	84.932	1.00	9.84
ATOM	2775	CG2	VAL	A	353	17.089	35.402	82.409	1.00	12.88
ATOM	2776	N	LYS	A	354	17.112	39.198	84.995	1.00	14.12
ATOM	2777	CA	LYS	A	354	17.002	39.913	86.238	1.00	12.36
ATOM	2778	C	LYS	A	354	15.826	40.848	86.179	1.00	17.58
ATOM	2779	O	LYS	A	354	15.072	41.024	87.109	1.00	19.87
ATOM	2780	CB	LYS	A	354	18.298	40.637	86.571	1.00	17.00
ATOM	2781	CG	LYS	A	354	18.143	41.562	87.760	1.00	23.68
ATOM	2782	CD	LYS	A	354	19.434	42.305	88.057	1.00	46.34
ATOM	2783	CE	LYS	A	354	19.458	43.018	89.409	1.00	67.61
ATOM	2784	NZ	LYS	A	354	20.473	44.087	89.499	1.00	72.09
ATOM	2785	N	THR	A	355	15.685	41.464	85.045	1.00	17.30
ATOM	2786	CA	THR	A	355	14.634	42.423	84.776	1.00	19.03
ATOM	2787	C	THR	A	355	13.239	41.788	84.894	1.00	24.56
ATOM	2788	O	THR	A	355	12.375	42.258	85.644	1.00	21.41
ATOM	2789	CB	THR	A	355	14.938	43.046	83.383	1.00	26.33
ATOM	2790	OG1	THR	A	355	15.936	44.041	83.502	1.00	33.25
ATOM	2791	CG2	THR	A	355	13.720	43.535	82.618	1.00	35.80
ATOM	2792	N	PHE	A	356	12.986	40.698	84.173	1.00	15.72
ATOM	2793	CA	PHE	A	356	11.685	40.084	84.266	1.00	13.01
ATOM	2794	C	PHE	A	356	11.492	39.347	85.550	1.00	16.31
ATOM	2795	O	PHE	A	356	10.364	39.197	85.974	1.00	17.60
ATOM	2796	CB	PHE	A	356	11.633	38.916	83.282	1.00	14.64

ATOM 2797 CG PHE A 356 11.306 39.389 81.925 1.00 20.28
ATOM 2798 CD1 PHE A 356 10.172 40.180 81.740 1.00 26.98
ATOM 2799 CD2 PHE A 356 12.119 39.030 80.848 1.00 25.24
ATOM 2800 CE1 PHE A 356 9.854 40.645 80.463 1.00 32.69
ATOM 2801 CE2 PHE A 356 11.801 39.480 79.568 1.00 32.46
ATOM 2802 CZ PHE A 356 10.672 40.285 79.388 1.00 34.40
ATOM 2803 N GLY A 357 12.567 38.773 86.080 1.00 13.33
ATOM 2804 CA GLY A 357 12.484 37.898 87.250 1.00 13.08
ATOM 2805 C GLY A 357 12.710 36.459 86.719 1.00 14.31
ATOM 2806 O GLY A 357 12.203 36.080 85.639 1.00 15.86
ATOM 2807 N GLU A 358 13.458 35.652 87.492 1.00 10.82
ATOM 2808 CA GLU A 358 13.852 34.295 87.104 1.00 14.45
ATOM 2809 C GLU A 358 12.748 33.275 86.946 1.00 17.31
ATOM 2810 O GLU A 358 12.966 32.190 86.382 1.00 16.43
ATOM 2811 CB GLU A 358 14.976 33.766 88.003 1.00 15.36
ATOM 2812 CG GLU A 358 14.483 33.548 89.449 1.00 29.12
ATOM 2813 CD GLU A 358 15.577 33.165 90.432 1.00 29.41
ATOM 2814 OE1 GLU A 358 16.737 32.999 90.104 1.00 53.87
ATOM 2815 OE2 GLU A 358 15.150 33.063 91.673 1.00 78.82
ATOM 2816 N THR A 359 11.552 33.623 87.445 1.00 15.09
ATOM 2817 CA THR A 359 10.397 32.715 87.319 1.00 14.57
ATOM 2818 C THR A 359 9.370 33.195 86.297 1.00 18.20
ATOM 2819 O THR A 359 8.308 32.602 86.161 1.00 17.32
ATOM 2820 CB THR A 359 9.665 32.513 88.661 1.00 10.95
ATOM 2821 OG1 THR A 359 9.014 33.714 89.058 1.00 16.14
ATOM 2822 CG2 THR A 359 10.598 31.933 89.726 1.00 12.38
ATOM 2823 N HIS A 360 9.704 34.267 85.600 1.00 13.00
ATOM 2824 CA HIS A 360 8.838 34.886 84.648 1.00 13.62
ATOM 2825 C HIS A 360 8.702 34.081 83.372 1.00 22.06
ATOM 2826 O HIS A 360 9.701 33.663 82.770 1.00 18.40
ATOM 2827 CB HIS A 360 9.369 36.276 84.298 1.00 14.44
ATOM 2828 CG HIS A 360 8.321 37.043 83.556 1.00 16.43
ATOM 2829 ND1 HIS A 360 7.725 38.218 84.074 1.00 18.54
ATOM 2830 CD2 HIS A 360 7.765 36.779 82.349 1.00 13.02
ATOM 2831 CE1 HIS A 360 6.832 38.646 83.174 1.00 15.62
ATOM 2832 NE2 HIS A 360 6.848 37.781 82.139 1.00 17.56
ATOM 2833 N PRO A 361 7.447 33.890 82.953 1.00 18.85
ATOM 2834 CA PRO A 361 7.204 33.111 81.752 1.00 17.22
ATOM 2835 C PRO A 361 7.871 33.616 80.481 1.00 18.11
ATOM 2836 O PRO A 361 8.093 32.859 79.534 1.00 16.08
ATOM 2837 CB PRO A 361 5.680 32.939 81.654 1.00 17.39
ATOM 2838 CG PRO A 361 5.232 32.970 83.121 1.00 22.59
ATOM 2839 CD PRO A 361 6.220 33.896 83.819 1.00 17.68
ATOM 2840 N PHE A 362 8.192 34.899 80.434 1.00 13.89
ATOM 2841 CA PHE A 362 8.822 35.408 79.237 1.00 15.98
ATOM 2842 C PHE A 362 10.286 35.089 79.221 1.00 13.98
ATOM 2843 O PHE A 362 10.926 35.501 78.277 1.00 14.94
ATOM 2844 CB PHE A 362 8.690 36.921 79.035 1.00 19.97
ATOM 2845 CG PHE A 362 7.273 37.416 78.899 1.00 23.23
ATOM 2846 CD1 PHE A 362 6.227 36.538 78.616 1.00 24.55
ATOM 2847 CD2 PHE A 362 6.998 38.782 79.021 1.00 27.19
ATOM 2848 CE1 PHE A 362 4.927 37.035 78.487 1.00 26.53
ATOM 2849 CE2 PHE A 362 5.704 39.298 78.891 1.00 31.58
ATOM 2850 CZ PHE A 362 4.663 38.404 78.626 1.00 28.23
ATOM 2851 N THR A 363 10.787 34.395 80.244 1.00 14.98
ATOM 2852 CA THR A 363 12.209 33.992 80.288 1.00 12.84
ATOM 2853 C THR A 363 12.446 32.567 79.724 1.00 19.07
ATOM 2854 O THR A 363 13.562 32.031 79.682 1.00 15.98
ATOM 2855 CB THR A 363 12.924 34.230 81.643 1.00 12.16
ATOM 2856 OG1 THR A 363 12.406 33.364 82.634 1.00 12.37
ATOM 2857 CG2 THR A 363 12.828 35.706 82.046 1.00 15.02

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ATOM   2858  N   LYS A 364      11.344  31.922  79.336  1.00 15.36
ATOM   2859  CA  LYS A 364      11.390  30.603  78.747  1.00 12.01
ATOM   2860  C   LYS A 364      11.762  30.792  77.276  1.00 15.28
ATOM   2861  O   LYS A 364      11.373  31.788  76.600  1.00 12.86
ATOM   2862  CB  LYS A 364       9.988  30.005  78.770  1.00 11.05
ATOM   2863  CG  LYS A 364       9.506  29.626  80.142  1.00 18.14
ATOM   2864  CD  LYS A 364       8.036  29.218  80.150  1.00 16.21
ATOM   2865  CE  LYS A 364       7.664  28.728  81.534  1.00 29.65
ATOM   2866  NZ  LYS A 364       6.221  28.541  81.736  1.00 39.48
ATOM   2867  N   LEU A 365      12.474  29.806  76.720  1.00 13.94
ATOM   2868  CA  LEU A 365      12.885  29.872  75.325  1.00 12.51
ATOM   2869  C   LEU A 365      11.671  29.766  74.388  1.00 18.38
ATOM   2870  O   LEU A 365      11.491  30.548  73.436  1.00 17.81
ATOM   2871  CB  LEU A 365      13.926  28.767  75.037  1.00 13.31
ATOM   2872  CG  LEU A 365      14.542  28.857  73.653  1.00 18.68
ATOM   2873  CD1 LEU A 365      15.219  30.203  73.489  1.00 19.46
ATOM   2874  CD2 LEU A 365      15.612  27.777  73.545  1.00 19.36
ATOM   2875  N   VAL A 366      10.805  28.804  74.685  1.00 15.92
ATOM   2876  CA  VAL A 366       9.534  28.572  73.964  1.00 18.17
ATOM   2877  C   VAL A 366       8.411  29.193  74.832  1.00 19.02
ATOM   2878  O   VAL A 366       8.188  28.759  75.953  1.00 15.50
ATOM   2879  CB  VAL A 366       9.276  27.091  73.587  1.00 17.55
ATOM   2880  CG1 VAL A 366       7.985  26.938  72.761  1.00 13.93
ATOM   2881  CG2 VAL A 366      10.488  26.522  72.828  1.00 15.55
ATOM   2882  N   VAL A 367       7.724  30.226  74.348  1.00 15.38
ATOM   2883  CA  VAL A 367       6.725  30.907  75.166  1.00 14.70
ATOM   2884  C   VAL A 367       5.318  30.654  74.723  1.00 22.22
ATOM   2885  O   VAL A 367       5.145  30.064  73.683  1.00 21.51
ATOM   2886  CB  VAL A 367       6.946  32.396  75.034  1.00 17.48
ATOM   2887  CG1 VAL A 367       8.305  32.742  75.633  1.00 17.07
ATOM   2888  CG2 VAL A 367       6.874  32.793  73.566  1.00 15.29
ATOM   2889  N   ASP A 368       4.331  31.134  75.471  1.00 17.48
ATOM   2890  CA  ASP A 368       2.937  30.940  75.054  1.00 16.38
ATOM   2891  C   ASP A 368       2.362  32.335  74.997  1.00 14.53
ATOM   2892  O   ASP A 368       2.198  32.991  75.998  1.00 18.37
ATOM   2893  CB  ASP A 368       2.181  30.036  76.049  1.00 17.68
ATOM   2894  CG  ASP A 368       0.683  29.999  75.796  1.00 25.53
ATOM   2895  OD1 ASP A 368       0.115  30.610  74.927  1.00 17.63
ATOM   2896  OD2 ASP A 368       0.047  29.214  76.601  1.00 31.38
ATOM   2897  N   LEU A 369       2.161  32.859  73.829  1.00 10.10
ATOM   2898  CA  LEU A 369       1.697  34.212  73.698  1.00 12.48
ATOM   2899  C   LEU A 369       0.215  34.381  73.668  1.00 18.80
ATOM   2900  O   LEU A 369      -0.276  35.378  73.147  1.00 21.46
ATOM   2901  CB  LEU A 369       2.274  34.974  72.500  1.00 10.77
ATOM   2902  CG  LEU A 369       3.779  35.129  72.552  1.00 17.85
ATOM   2903  CD1 LEU A 369       4.256  35.435  71.127  1.00 16.11
ATOM   2904  CD2 LEU A 369       4.076  36.290  73.493  1.00 16.09
ATOM   2905  N   THR A 370      -0.484  33.422  74.207  1.00 18.13
ATOM   2906  CA  THR A 370      -1.922  33.603  74.226  1.00 19.34
ATOM   2907  C   THR A 370      -2.259  34.856  75.052  1.00 24.31
ATOM   2908  O   THR A 370      -1.890  35.048  76.218  1.00 22.17
ATOM   2909  CB  THR A 370      -2.558  32.439  74.994  1.00 31.44
ATOM   2910  OG1 THR A 370      -2.383  31.226  74.291  1.00 25.88
ATOM   2911  CG2 THR A 370      -4.020  32.785  75.234  1.00 26.93
ATOM   2912  N   ASP A 371      -3.003  35.742  74.449  1.00 22.55
ATOM   2913  CA  ASP A 371      -3.367  36.940  75.169  1.00 23.57
ATOM   2914  C   ASP A 371      -2.254  37.904  75.464  1.00 24.80
ATOM   2915  O   ASP A 371      -2.491  38.846  76.176  1.00 21.58
ATOM   2916  CB  ASP A 371      -4.191  36.676  76.420  1.00 26.84
ATOM   2917  CG  ASP A 371      -5.528  36.132  75.994  1.00 39.22
ATOM   2918  OD1 ASP A 371      -6.111  36.460  74.949  1.00 32.59
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ATOM 2919 OD2 ASP A 371 -5.951 35.237 76.850 1.00 41.05
ATOM 2920 N ILE A 372 -1.084 37.719 74.889 1.00 20.31
ATOM 2921 CA ILE A 372 -0.009 38.663 75.120 1.00 17.55
ATOM 2922 C ILE A 372 0.375 39.330 73.822 1.00 19.77
ATOM 2923 O ILE A 372 0.553 38.641 72.818 1.00 22.17
ATOM 2924 CB ILE A 372 1.249 37.911 75.480 1.00 20.80
ATOM 2925 CG1 ILE A 372 1.016 36.973 76.645 1.00 22.62
ATOM 2926 CG2 ILE A 372 2.392 38.904 75.707 1.00 22.69
ATOM 2927 CD1 ILE A 372 0.374 37.712 77.794 1.00 32.92
ATOM 2928 N ASP A 373 0.560 40.636 73.857 1.00 14.79
ATOM 2929 CA ASP A 373 0.958 41.385 72.693 1.00 14.17
ATOM 2930 C ASP A 373 2.445 41.160 72.485 1.00 21.76
ATOM 2931 O ASP A 373 3.280 41.384 73.355 1.00 21.72
ATOM 2932 CB ASP A 373 0.717 42.882 72.934 1.00 15.14
ATOM 2933 CG ASP A 373 1.247 43.773 71.829 1.00 21.68
ATOM 2934 OD1 ASP A 373 2.004 43.399 70.933 1.00 23.88
ATOM 2935 OD2 ASP A 373 0.769 45.005 71.893 1.00 22.14
ATOM 2936 N PRO A 374 2.810 40.719 71.305 1.00 21.82
ATOM 2937 CA PRO A 374 4.210 40.450 71.050 1.00 21.09
ATOM 2938 C PRO A 374 5.149 41.600 71.350 1.00 19.90
ATOM 2939 O PRO A 374 6.240 41.371 71.873 1.00 14.86
ATOM 2940 CB PRO A 374 4.312 39.943 69.607 1.00 23.86
ATOM 2941 CG PRO A 374 2.896 39.591 69.183 1.00 24.47
ATOM 2942 CD PRO A 374 1.967 40.317 70.149 1.00 22.40
ATOM 2943 N ASP A 375 4.722 42.819 71.007 1.00 14.82
ATOM 2944 CA ASP A 375 5.537 44.022 71.250 1.00 16.55
ATOM 2945 C ASP A 375 5.870 44.193 72.728 1.00 20.20
ATOM 2946 O ASP A 375 6.896 44.725 73.140 1.00 19.90
ATOM 2947 CB ASP A 375 4.811 45.273 70.724 1.00 15.07
ATOM 2948 CG ASP A 375 4.971 45.315 69.240 1.00 18.22
ATOM 2949 OD1 ASP A 375 5.933 44.823 68.667 1.00 18.62
ATOM 2950 OD2 ASP A 375 3.980 45.894 68.637 1.00 21.94
ATOM 2951 N VAL A 376 4.952 43.710 73.532 1.00 17.46
ATOM 2952 CA VAL A 376 5.064 43.756 74.968 1.00 17.12
ATOM 2953 C VAL A 376 5.930 42.629 75.532 1.00 22.81
ATOM 2954 O VAL A 376 6.634 42.825 76.514 1.00 23.05
ATOM 2955 CB VAL A 376 3.686 43.683 75.601 1.00 19.84
ATOM 2956 CG1 VAL A 376 3.841 43.374 77.085 1.00 21.03
ATOM 2957 CG2 VAL A 376 2.950 45.006 75.445 1.00 15.99
ATOM 2958 N ALA A 377 5.896 41.436 74.950 1.00 16.51
ATOM 2959 CA ALA A 377 6.711 40.369 75.484 1.00 15.14
ATOM 2960 C ALA A 377 8.136 40.459 74.987 1.00 16.36
ATOM 2961 O ALA A 377 9.037 39.827 75.498 1.00 13.72
ATOM 2962 CB ALA A 377 6.105 39.042 75.033 1.00 14.47
ATOM 2963 N TYR A 378 8.350 41.216 73.928 1.00 15.01
ATOM 2964 CA TYR A 378 9.671 41.304 73.305 1.00 15.91
ATOM 2965 C TYR A 378 10.864 41.502 74.222 1.00 20.25
ATOM 2966 O TYR A 378 10.855 42.413 75.021 1.00 12.62
ATOM 2967 CB TYR A 378 9.648 42.365 72.215 1.00 15.77
ATOM 2968 CG TYR A 378 10.914 42.510 71.412 1.00 14.92
ATOM 2969 CD1 TYR A 378 11.304 41.495 70.541 1.00 15.79
ATOM 2970 CD2 TYR A 378 11.691 43.665 71.485 1.00 12.44
ATOM 2971 CE1 TYR A 378 12.437 41.625 69.745 1.00 13.18
ATOM 2972 CE2 TYR A 378 12.830 43.807 70.694 1.00 10.34
ATOM 2973 CZ TYR A 378 13.206 42.783 69.828 1.00 13.99
ATOM 2974 OH TYR A 378 14.324 42.907 69.034 1.00 17.70
ATOM 2975 N SER A 379 11.924 40.690 74.065 1.00 19.28
ATOM 2976 CA SER A 379 13.121 40.813 74.896 1.00 16.38
ATOM 2977 C SER A 379 14.324 40.157 74.257 1.00 16.16
ATOM 2978 O SER A 379 14.257 39.722 73.109 1.00 14.62
ATOM 2979 CB SER A 379 12.883 40.256 76.301 1.00 13.15

ATOM 2980 OG SER A 379 13.035 38.846 76.268 1.00 14.44
ATOM 2981 N SER A 380 15.431 40.094 75.019 1.00 13.34
ATOM 2982 CA SER A 380 16.705 39.480 74.595 1.00 13.12
ATOM 2983 C SER A 380 16.734 37.989 74.811 1.00 13.76
ATOM 2984 O SER A 380 17.705 37.336 74.470 1.00 15.40
ATOM 2985 CB SER A 380 17.864 40.053 75.421 1.00 12.15
ATOM 2986 OG SER A 380 17.883 41.443 75.162 1.00 18.31
ATOM 2987 N VAL A 381 15.685 37.472 75.444 1.00 10.45
ATOM 2988 CA VAL A 381 15.613 36.070 75.778 1.00 10.90
ATOM 2989 C VAL A 381 15.709 35.177 74.561 1.00 15.64
ATOM 2990 O VAL A 381 16.547 34.295 74.468 1.00 17.11
ATOM 2991 CB VAL A 381 14.384 35.734 76.636 1.00 12.01
ATOM 2992 CG1 VAL A 381 14.269 34.234 76.861 1.00 12.07
ATOM 2993 CG2 VAL A 381 14.410 36.468 77.980 1.00 9.45
ATOM 2994 N PRO A 382 14.832 35.347 73.603 1.00 12.68
ATOM 2995 CA PRO A 382 14.939 34.427 72.488 1.00 11.41
ATOM 2996 C PRO A 382 16.300 34.551 71.794 1.00 17.91
ATOM 2997 O PRO A 382 16.830 33.564 71.249 1.00 16.29
ATOM 2998 CB PRO A 382 13.817 34.802 71.513 1.00 11.39
ATOM 2999 CG PRO A 382 13.328 36.176 71.947 1.00 14.03
ATOM 3000 CD PRO A 382 13.778 36.366 73.378 1.00 10.32
ATOM 3001 N TYR A 383 16.835 35.791 71.761 1.00 11.66
ATOM 3002 CA TYR A 383 18.106 36.045 71.127 1.00 11.53
ATOM 3003 C TYR A 383 19.229 35.291 71.821 1.00 17.48
ATOM 3004 O TYR A 383 19.975 34.554 71.192 1.00 13.36
ATOM 3005 CB TYR A 383 18.443 37.560 71.238 1.00 12.85
ATOM 3006 CG TYR A 383 17.598 38.417 70.335 1.00 14.70
ATOM 3007 CD1 TYR A 383 16.309 38.809 70.707 1.00 16.40
ATOM 3008 CD2 TYR A 383 18.069 38.790 69.073 1.00 13.38
ATOM 3009 CE1 TYR A 383 15.536 39.577 69.832 1.00 15.57
ATOM 3010 CE2 TYR A 383 17.318 39.560 68.187 1.00 10.16
ATOM 3011 CZ TYR A 383 16.039 39.947 68.582 1.00 14.31
ATOM 3012 OH TYR A 383 15.280 40.713 67.728 1.00 12.64
ATOM 3013 N GLU A 384 19.335 35.529 73.134 1.00 12.00
ATOM 3014 CA GLU A 384 20.409 35.067 73.989 1.00 10.21
ATOM 3015 C GLU A 384 20.251 33.701 74.605 1.00 15.22
ATOM 3016 O GLU A 384 21.228 32.952 74.692 1.00 12.89
ATOM 3017 CB GLU A 384 20.888 36.205 74.899 1.00 9.54
ATOM 3018 CG GLU A 384 21.207 37.468 74.056 1.00 7.64
ATOM 3019 CD GLU A 384 22.497 37.277 73.260 1.00 19.43
ATOM 3020 OE1 GLU A 384 23.237 36.310 73.331 1.00 15.97
ATOM 3021 OE2 GLU A 384 22.779 38.260 72.480 1.00 11.96
ATOM 3022 N LYS A 385 19.036 33.345 75.034 1.00 12.07
ATOM 3023 CA LYS A 385 18.898 31.984 75.533 1.00 13.42
ATOM 3024 C LYS A 385 19.015 31.052 74.294 1.00 16.08
ATOM 3025 O LYS A 385 19.593 29.947 74.359 1.00 13.01
ATOM 3026 CB LYS A 385 17.623 31.742 76.350 1.00 12.55
ATOM 3027 CG LYS A 385 17.554 30.302 76.839 1.00 14.13
ATOM 3028 CD LYS A 385 16.371 29.987 77.750 1.00 11.06
ATOM 3029 CE LYS A 385 16.360 30.692 79.099 1.00 12.13
ATOM 3030 NZ LYS A 385 15.359 30.132 80.029 1.00 11.47
ATOM 3031 N GLY A 386 18.477 31.533 73.138 1.00 11.14
ATOM 3032 CA GLY A 386 18.521 30.792 71.864 1.00 9.75
ATOM 3033 C GLY A 386 19.974 30.567 71.409 1.00 16.73
ATOM 3034 O GLY A 386 20.417 29.446 71.100 1.00 13.12
ATOM 3035 N PHE A 387 20.747 31.663 71.383 1.00 15.76
ATOM 3036 CA PHE A 387 22.155 31.620 71.013 1.00 13.70
ATOM 3037 C PHE A 387 22.926 30.744 71.982 1.00 17.51
ATOM 3038 O PHE A 387 23.763 29.955 71.563 1.00 14.54
ATOM 3039 CB PHE A 387 22.846 32.992 70.918 1.00 13.42
ATOM 3040 CG PHE A 387 24.350 32.820 70.816 1.00 12.26

ATOM 3041 CD1 PHE A 387 24.963 32.588 69.582 1.00 11.34
ATOM 3042 CD2 PHE A 387 25.170 32.869 71.944 1.00 14.36
ATOM 3043 CE1 PHE A 387 26.346 32.422 69.468 1.00 12.53
ATOM 3044 CE2 PHE A 387 26.558 32.693 71.864 1.00 12.76
ATOM 3045 CZ PHE A 387 27.141 32.454 70.618 1.00 8.96
ATOM 3046 N ALA A 388 22.620 30.836 73.284 1.00 15.35
ATOM 3047 CA ALA A 388 23.344 30.017 74.240 1.00 12.20
ATOM 3048 C ALA A 388 23.084 28.552 74.014 1.00 15.51
ATOM 3049 O ALA A 388 23.973 27.717 74.125 1.00 16.33
ATOM 3050 CB ALA A 388 22.970 30.429 75.655 1.00 13.75
ATOM 3051 N LEU A 389 21.843 28.209 73.701 1.00 12.77
ATOM 3052 CA LEU A 389 21.542 26.793 73.446 1.00 13.17
ATOM 3053 C LEU A 389 22.382 26.286 72.266 1.00 20.08
ATOM 3054 O LEU A 389 23.030 25.214 72.312 1.00 16.85
ATOM 3055 CB LEU A 389 20.065 26.657 73.061 1.00 9.51
ATOM 3056 CG LEU A 389 19.639 25.263 72.656 1.00 16.80
ATOM 3057 CD1 LEU A 389 20.089 24.265 73.719 1.00 16.85
ATOM 3058 CD2 LEU A 389 18.119 25.247 72.538 1.00 12.75
ATOM 3059 N LEU A 390 22.374 27.059 71.172 1.00 11.37
ATOM 3060 CA LEU A 390 23.140 26.650 69.998 1.00 9.78
ATOM 3061 C LEU A 390 24.651 26.539 70.251 1.00 19.70
ATOM 3062 O LEU A 390 25.305 25.609 69.745 1.00 18.74
ATOM 3063 CB LEU A 390 22.887 27.525 68.764 1.00 9.94
ATOM 3064 CG LEU A 390 21.402 27.590 68.367 1.00 14.32
ATOM 3065 CD1 LEU A 390 21.153 28.632 67.257 1.00 14.04
ATOM 3066 CD2 LEU A 390 20.902 26.209 67.923 1.00 14.70
ATOM 3067 N PHE A 391 25.205 27.490 71.026 1.00 12.66
ATOM 3068 CA PHE A 391 26.635 27.538 71.333 1.00 13.86
ATOM 3069 C PHE A 391 27.053 26.343 72.147 1.00 17.87
ATOM 3070 O PHE A 391 28.104 25.733 71.983 1.00 18.52
ATOM 3071 CB PHE A 391 26.964 28.806 72.105 1.00 14.47
ATOM 3072 CG PHE A 391 28.437 29.179 72.101 1.00 18.51
ATOM 3073 CD1 PHE A 391 29.237 28.996 70.973 1.00 18.55
ATOM 3074 CD2 PHE A 391 29.030 29.748 73.233 1.00 18.59
ATOM 3075 CE1 PHE A 391 30.571 29.402 70.966 1.00 15.73
ATOM 3076 CE2 PHE A 391 30.373 30.137 73.252 1.00 18.49
ATOM 3077 CZ PHE A 391 31.148 29.954 72.109 1.00 15.63
ATOM 3078 N TYR A 392 26.148 26.008 73.039 1.00 16.91
ATOM 3079 CA TYR A 392 26.315 24.893 73.944 1.00 17.78
ATOM 3080 C TYR A 392 26.288 23.570 73.175 1.00 19.46
ATOM 3081 O TYR A 392 27.095 22.666 73.388 1.00 18.21
ATOM 3082 CB TYR A 392 25.243 25.000 75.049 1.00 15.50
ATOM 3083 CG TYR A 392 24.928 23.688 75.736 1.00 20.94
ATOM 3084 CD1 TYR A 392 25.849 23.106 76.609 1.00 24.90
ATOM 3085 CD2 TYR A 392 23.715 23.034 75.528 1.00 21.37
ATOM 3086 CE1 TYR A 392 25.596 21.899 77.260 1.00 23.89
ATOM 3087 CE2 TYR A 392 23.438 21.821 76.162 1.00 24.11
ATOM 3088 CZ TYR A 392 24.383 21.256 77.020 1.00 28.03
ATOM 3089 OH TYR A 392 24.112 20.087 77.665 1.00 20.09
ATOM 3090 N LEU A 393 25.332 23.456 72.271 1.00 14.83
ATOM 3091 CA LEU A 393 25.210 22.267 71.440 1.00 15.47
ATOM 3092 C LEU A 393 26.432 22.122 70.544 1.00 20.32
ATOM 3093 O LEU A 393 26.867 21.005 70.304 1.00 21.36
ATOM 3094 CB LEU A 393 23.961 22.344 70.508 1.00 16.00
ATOM 3095 CG LEU A 393 22.638 22.027 71.223 1.00 18.37
ATOM 3096 CD1 LEU A 393 21.443 22.392 70.347 1.00 15.16
ATOM 3097 CD2 LEU A 393 22.577 20.601 71.795 1.00 17.06
ATOM 3098 N GLU A 394 26.921 23.255 70.015 1.00 16.00
ATOM 3099 CA GLU A 394 28.104 23.298 69.160 1.00 13.58
ATOM 3100 C GLU A 394 29.268 22.719 69.931 1.00 17.05
ATOM 3101 O GLU A 394 30.014 21.889 69.453 1.00 15.79

ATOM	3102	CB	GLU	A	394	28.434	24.745	68.776	1.00	17.59
ATOM	3103	CG	GLU	A	394	29.903	24.871	68.320	1.00	23.24
ATOM	3104	CD	GLU	A	394	30.332	26.300	68.152	1.00	32.12
ATOM	3105	OE1	GLU	A	394	29.709	27.146	67.532	1.00	23.57
ATOM	3106	OE2	GLU	A	394	31.480	26.547	68.714	1.00	26.27
ATOM	3107	N	GLN	A	395	29.410	23.127	71.183	1.00	16.99
ATOM	3108	CA	GLN	A	395	30.462	22.610	72.030	1.00	17.56
ATOM	3109	C	GLN	A	395	30.293	21.127	72.360	1.00	23.89
ATOM	3110	O	GLN	A	395	31.258	20.359	72.421	1.00	24.66
ATOM	3111	CB	GLN	A	395	30.725	23.461	73.318	1.00	17.71
ATOM	3112	CG	GLN	A	395	31.195	24.888	72.918	1.00	17.45
ATOM	3113	CD	GLN	A	395	31.354	25.851	74.081	1.00	21.98
ATOM	3114	OE1	GLN	A	395	30.986	25.584	75.224	1.00	16.80
ATOM	3115	NE2	GLN	A	395	31.943	26.985	73.776	1.00	16.78
ATOM	3116	N	LEU	A	396	29.058	20.706	72.588	1.00	21.86
ATOM	3117	CA	LEU	A	396	28.767	19.330	72.932	1.00	20.27
ATOM	3118	C	LEU	A	396	28.936	18.387	71.744	1.00	22.03
ATOM	3119	O	LEU	A	396	29.381	17.260	71.857	1.00	25.07
ATOM	3120	CB	LEU	A	396	27.315	19.276	73.441	1.00	18.56
ATOM	3121	CG	LEU	A	396	26.852	17.960	73.994	1.00	22.66
ATOM	3122	CD1	LEU	A	396	27.493	17.780	75.354	1.00	25.52
ATOM	3123	CD2	LEU	A	396	25.340	18.045	74.179	1.00	17.79
ATOM	3124	N	LEU	A	397	28.575	18.831	70.579	1.00	15.28
ATOM	3125	CA	LEU	A	397	28.603	17.939	69.433	1.00	16.80
ATOM	3126	C	LEU	A	397	29.846	17.946	68.565	1.00	26.85
ATOM	3127	O	LEU	A	397	29.864	17.399	67.458	1.00	29.08
ATOM	3128	CB	LEU	A	397	27.371	18.242	68.552	1.00	15.51
ATOM	3129	CG	LEU	A	397	26.013	18.018	69.261	1.00	20.96
ATOM	3130	CD1	LEU	A	397	24.874	18.717	68.501	1.00	19.35
ATOM	3131	CD2	LEU	A	397	25.692	16.536	69.461	1.00	19.12
ATOM	3132	N	GLY	A	398	30.901	18.598	68.985	1.00	24.55
ATOM	3133	CA	GLY	A	398	32.006	18.516	68.076	1.00	27.19
ATOM	3134	C	GLY	A	398	32.648	19.794	67.598	1.00	29.41
ATOM	3135	O	GLY	A	398	33.743	19.713	67.048	1.00	30.13
ATOM	3136	N	GLY	A	399	32.020	20.951	67.752	1.00	19.25
ATOM	3137	CA	GLY	A	399	32.700	22.143	67.291	1.00	16.50
ATOM	3138	C	GLY	A	399	31.937	22.850	66.212	1.00	15.03
ATOM	3139	O	GLY	A	399	30.976	22.315	65.694	1.00	17.49
ATOM	3140	N	PRO	A	400	32.397	24.045	65.870	1.00	21.52
ATOM	3141	CA	PRO	A	400	31.758	24.918	64.909	1.00	21.69
ATOM	3142	C	PRO	A	400	31.599	24.312	63.552	1.00	29.85
ATOM	3143	O	PRO	A	400	30.540	24.433	62.921	1.00	24.28
ATOM	3144	CB	PRO	A	400	32.574	26.210	64.802	1.00	21.33
ATOM	3145	CG	PRO	A	400	33.868	25.949	65.552	1.00	27.07
ATOM	3146	CD	PRO	A	400	33.698	24.635	66.306	1.00	25.67
ATOM	3147	N	GLU	A	401	32.679	23.674	63.128	1.00	28.84
ATOM	3148	CA	GLU	A	401	32.630	23.048	61.831	1.00	30.42
ATOM	3149	C	GLU	A	401	31.491	22.055	61.764	1.00	22.63
ATOM	3150	O	GLU	A	401	30.664	22.034	60.872	1.00	21.35
ATOM	3151	CB	GLU	A	401	33.915	22.247	61.648	1.00	35.39
ATOM	3152	CG	GLU	A	401	35.125	23.160	61.445	1.00	70.34
ATOM	3153	CD	GLU	A	401	35.978	22.574	60.355	1.00	100.00
ATOM	3154	OE1	GLU	A	401	35.711	21.486	59.851	1.00	100.00
ATOM	3155	OE2	GLU	A	401	37.013	23.329	60.026	1.00	100.00
ATOM	3156	N	ILE	A	402	31.484	21.185	62.731	1.00	20.44
ATOM	3157	CA	ILE	A	402	30.481	20.165	62.766	1.00	21.27
ATOM	3158	C	ILE	A	402	29.082	20.761	62.895	1.00	26.84
ATOM	3159	O	ILE	A	402	28.142	20.366	62.199	1.00	18.68
ATOM	3160	CB	ILE	A	402	30.819	19.218	63.904	1.00	24.03
ATOM	3161	CG1	ILE	A	402	31.974	18.299	63.503	1.00	23.45
ATOM	3162	CG2	ILE	A	402	29.587	18.421	64.334	1.00	28.69

ATOM 3224 CB TYR A 410 18.973 22.980 59.910 1.00 19.89
ATOM 3225 CG TYR A 410 17.947 23.924 60.516 1.00 20.57
ATOM 3226 CD1 TYR A 410 16.715 23.463 60.981 1.00 22.20
ATOM 3227 CD2 TYR A 410 18.219 25.286 60.649 1.00 21.16
ATOM 3228 CE1 TYR A 410 15.767 24.320 61.551 1.00 17.85
ATOM 3229 CE2 TYR A 410 17.289 26.163 61.213 1.00 22.58
ATOM 3230 CZ TYR A 410 16.064 25.679 61.682 1.00 25.33
ATOM 3231 OH TYR A 410 15.182 26.528 62.315 1.00 20.84
ATOM 3232 N VAL A 411 18.809 24.459 57.147 1.00 17.01
ATOM 3233 CA VAL A 411 18.378 25.520 56.254 1.00 20.36
ATOM 3234 C VAL A 411 17.876 24.946 54.936 1.00 25.04
ATOM 3235 O VAL A 411 16.859 25.377 54.394 1.00 22.50
ATOM 3236 CB VAL A 411 19.533 26.493 55.937 1.00 24.82
ATOM 3237 CG1 VAL A 411 19.220 27.380 54.724 1.00 21.10
ATOM 3238 CG2 VAL A 411 19.920 27.333 57.163 1.00 25.82
ATOM 3239 N GLU A 412 18.616 23.952 54.443 1.00 24.87
ATOM 3240 CA GLU A 412 18.264 23.283 53.202 1.00 24.91
ATOM 3241 C GLU A 412 16.960 22.532 53.366 1.00 24.56
ATOM 3242 O GLU A 412 16.045 22.612 52.555 1.00 26.86
ATOM 3243 CB GLU A 412 19.330 22.211 52.913 1.00 28.91
ATOM 3244 CG GLU A 412 20.206 22.405 51.660 1.00 51.34
ATOM 3245 CD GLU A 412 21.671 22.089 51.908 1.00100.00
ATOM 3246 OE1 GLU A 412 22.243 22.331 52.963 1.00100.00
ATOM 3247 OE2 GLU A 412 22.274 21.541 50.874 1.00100.00
ATOM 3248 N LYS A 413 16.909 21.757 54.442 1.00 19.78
ATOM 3249 CA LYS A 413 15.755 20.940 54.747 1.00 15.53
ATOM 3250 C LYS A 413 14.484 21.718 54.892 1.00 22.00
ATOM 3251 O LYS A 413 13.464 21.272 54.409 1.00 23.41
ATOM 3252 CB LYS A 413 16.020 20.156 56.008 1.00 17.04
ATOM 3253 CG LYS A 413 14.754 19.602 56.629 1.00 26.97
ATOM 3254 CD LYS A 413 14.225 18.351 55.955 1.00 37.17
ATOM 3255 CE LYS A 413 13.553 17.352 56.893 1.00 56.50
ATOM 3256 NZ LYS A 413 13.126 16.109 56.223 1.00 80.78
ATOM 3257 N PHE A 414 14.543 22.888 55.532 1.00 19.76
ATOM 3258 CA PHE A 414 13.366 23.700 55.808 1.00 17.00
ATOM 3259 C PHE A 414 13.192 24.945 54.985 1.00 21.55
ATOM 3260 O PHE A 414 12.329 25.748 55.303 1.00 17.11
ATOM 3261 CB PHE A 414 13.219 24.035 57.303 1.00 16.42
ATOM 3262 CG PHE A 414 13.047 22.800 58.122 1.00 15.55
ATOM 3263 CD1 PHE A 414 11.894 22.029 57.979 1.00 19.53
ATOM 3264 CD2 PHE A 414 14.024 22.368 59.015 1.00 20.06
ATOM 3265 CE1 PHE A 414 11.709 20.868 58.729 1.00 18.22
ATOM 3266 CE2 PHE A 414 13.861 21.205 59.771 1.00 21.10
ATOM 3267 CZ PHE A 414 12.695 20.456 59.627 1.00 19.80
ATOM 3268 N SER A 415 13.972 25.111 53.928 1.00 22.05
ATOM 3269 CA SER A 415 13.807 26.273 53.044 1.00 23.12
ATOM 3270 C SER A 415 12.380 26.434 52.548 1.00 23.50
ATOM 3271 O SER A 415 11.775 25.451 52.138 1.00 22.71
ATOM 3272 CB SER A 415 14.763 26.214 51.858 1.00 23.04
ATOM 3273 OG SER A 415 16.054 26.591 52.319 1.00 31.15
ATOM 3274 N TYR A 416 11.860 27.670 52.600 1.00 21.68
ATOM 3275 CA TYR A 416 10.506 28.036 52.165 1.00 22.03
ATOM 3276 C TYR A 416 9.401 27.514 53.056 1.00 22.90
ATOM 3277 O TYR A 416 8.239 27.556 52.681 1.00 19.44
ATOM 3278 CB TYR A 416 10.181 27.732 50.669 1.00 21.41
ATOM 3279 CG TYR A 416 11.390 28.011 49.812 1.00 21.01
ATOM 3280 CD1 TYR A 416 12.232 27.003 49.339 1.00 22.57
ATOM 3281 CD2 TYR A 416 11.686 29.339 49.509 1.00 20.93
ATOM 3282 CE1 TYR A 416 13.354 27.305 48.566 1.00 19.33
ATOM 3283 CE2 TYR A 416 12.792 29.665 48.729 1.00 23.16
ATOM 3284 CZ TYR A 416 13.628 28.643 48.271 1.00 32.30

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ATOM   3285  OH  TYR A 416      14.715  28.959  47.491  1.00 25.33
ATOM   3286  N   LYS A 417       9.747  27.012  54.230  1.00 21.98
ATOM   3287  CA  LYS A 417       8.749  26.482  55.127  1.00 20.82
ATOM   3288  C   LYS A 417       8.702  27.284  56.408  1.00 20.61
ATOM   3289  O   LYS A 417       9.629  28.038  56.671  1.00 18.79
ATOM   3290  CB  LYS A 417       9.115  25.041  55.481  1.00 22.26
ATOM   3291  CG  LYS A 417       9.094  24.078  54.266  1.00 29.52
ATOM   3292  CD  LYS A 417       7.999  24.355  53.237  1.00 72.37
ATOM   3293  CE  LYS A 417       8.204  23.679  51.876  1.00100.00
ATOM   3294  NZ  LYS A 417       7.124  23.931  50.895  1.00100.00
ATOM   3295  N   SER A 418       7.645  27.068  57.177  1.00 17.88
ATOM   3296  CA  SER A 418       7.429  27.702  58.478  1.00 19.91
ATOM   3297  C   SER A 418       7.410  26.538  59.459  1.00 23.93
ATOM   3298  O   SER A 418       6.660  25.601  59.227  1.00 21.09
ATOM   3299  CB  SER A 418       6.139  28.495  58.451  1.00 12.45
ATOM   3300  OG  SER A 418       6.279  29.520  57.494  1.00 17.15
ATOM   3301  N   ILE A 419       8.240  26.529  60.516  1.00 14.38
ATOM   3302  CA  ILE A 419       8.323  25.353  61.382  1.00 12.23
ATOM   3303  C   ILE A 419       8.330  25.695  62.841  1.00 16.49
ATOM   3304  O   ILE A 419       8.334  26.875  63.219  1.00 14.48
ATOM   3305  CB  ILE A 419       9.662  24.641  61.097  1.00 18.50
ATOM   3306  CG1 ILE A 419      10.782  25.649  61.392  1.00 18.34
ATOM   3307  CG2 ILE A 419       9.782  24.271  59.611  1.00 14.45
ATOM   3308  CD1 ILE A 419      12.163  25.028  61.473  1.00 22.79
ATOM   3309  N   THR A 420       8.320  24.635  63.644  1.00 16.31
ATOM   3310  CA  THR A 420       8.281  24.810  65.083  1.00 14.71
ATOM   3311  C   THR A 420       9.545  24.290  65.714  1.00 16.25
ATOM   3312  O   THR A 420      10.346  23.636  65.077  1.00 17.31
ATOM   3313  CB  THR A 420       7.118  24.004  65.697  1.00 17.59
ATOM   3314  OG1 THR A 420       7.437  22.645  65.519  1.00 17.59
ATOM   3315  CG2 THR A 420       5.794  24.260  65.010  1.00 16.45
ATOM   3316  N   THR A 421       9.679  24.540  67.010  1.00 15.19
ATOM   3317  CA  THR A 421      10.782  24.047  67.818  1.00 15.49
ATOM   3318  C   THR A 421      10.930  22.520  67.618  1.00 21.17
ATOM   3319  O   THR A 421      12.041  22.044  67.401  1.00 18.91
ATOM   3320  CB  THR A 421      10.564  24.437  69.309  1.00 10.87
ATOM   3321  OG1 THR A 421      10.618  25.851  69.383  1.00 15.99
ATOM   3322  CG2 THR A 421      11.691  23.868  70.170  1.00 11.46
ATOM   3323  N   ASP A 422       9.829  21.736  67.673  1.00 18.70
ATOM   3324  CA  ASP A 422       9.885  20.262  67.467  1.00 16.03
ATOM   3325  C   ASP A 422      10.469  19.867  66.107  1.00 16.08
ATOM   3326  O   ASP A 422      11.273  18.932  65.958  1.00 16.68
ATOM   3327  CB  ASP A 422       8.523  19.568  67.581  1.00 16.64
ATOM   3328  CG  ASP A 422       8.719  18.079  67.574  1.00 26.85
ATOM   3329  OD1 ASP A 422       9.568  17.580  68.286  1.00 23.44
ATOM   3330  OD2 ASP A 422       7.924  17.366  66.787  1.00 23.32
ATOM   3331  N   ASP A 423      10.069  20.575  65.060  1.00 17.50
ATOM   3332  CA  ASP A 423      10.654  20.224  63.757  1.00 18.18
ATOM   3333  C   ASP A 423      12.148  20.442  63.826  1.00 17.70
ATOM   3334  O   ASP A 423      12.922  19.645  63.316  1.00 15.95
ATOM   3335  CB  ASP A 423      10.099  21.075  62.613  1.00 17.77
ATOM   3336  CG  ASP A 423       8.614  20.972  62.510  1.00 20.51
ATOM   3337  OD1 ASP A 423       8.042  19.936  62.718  1.00 29.77
ATOM   3338  OD2 ASP A 423       8.016  22.095  62.226  1.00 18.32
ATOM   3339  N   TRP A 424      12.559  21.545  64.459  1.00 12.60
ATOM   3340  CA  TRP A 424      13.979  21.793  64.555  1.00 14.79
ATOM   3341  C   TRP A 424      14.690  20.684  65.330  1.00 19.67
ATOM   3342  O   TRP A 424      15.731  20.154  64.939  1.00 16.84
ATOM   3343  CB  TRP A 424      14.187  23.134  65.283  1.00 14.84
ATOM   3344  CG  TRP A 424      15.603  23.332  65.711  1.00 13.71
ATOM   3345  CD1 TRP A 424      16.594  23.830  64.937  1.00 15.42
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ATOM 3407 N TYR A 431 19.792 14.556 62.021 1.00 23.08
ATOM 3408 CA TYR A 431 21.104 14.862 61.497 1.00 23.26
ATOM 3409 C TYR A 431 22.209 14.166 62.288 1.00 31.19
ATOM 3410 O TYR A 431 23.152 13.580 61.747 1.00 27.84
ATOM 3411 CB TYR A 431 21.392 16.372 61.476 1.00 22.23
ATOM 3412 CG TYR A 431 22.660 16.758 60.741 1.00 23.21
ATOM 3413 CD1 TYR A 431 22.665 16.994 59.365 1.00 26.21
ATOM 3414 CD2 TYR A 431 23.864 16.920 61.433 1.00 28.30
ATOM 3415 CE1 TYR A 431 23.836 17.354 58.692 1.00 33.33
ATOM 3416 CE2 TYR A 431 25.045 17.277 60.777 1.00 29.03
ATOM 3417 CZ TYR A 431 25.032 17.498 59.401 1.00 33.73
ATOM 3418 OH TYR A 431 26.201 17.881 58.802 1.00 30.59
ATOM 3419 N PHE A 432 22.078 14.272 63.608 1.00 23.42
ATOM 3420 CA PHE A 432 23.039 13.735 64.556 1.00 22.14
ATOM 3421 C PHE A 432 22.659 12.334 65.001 1.00 27.48
ATOM 3422 O PHE A 432 22.824 11.964 66.168 1.00 20.81
ATOM 3423 CB PHE A 432 23.211 14.715 65.751 1.00 20.76
ATOM 3424 CG PHE A 432 24.035 15.918 65.348 1.00 21.62
ATOM 3425 CD1 PHE A 432 25.364 15.674 65.025 1.00 25.75
ATOM 3426 CD2 PHE A 432 23.566 17.232 65.250 1.00 22.01
ATOM 3427 CE1 PHE A 432 26.202 16.708 64.619 1.00 26.06
ATOM 3428 CE2 PHE A 432 24.398 18.277 64.841 1.00 24.06
ATOM 3429 CZ PHE A 432 25.732 18.014 64.539 1.00 22.97
ATOM 3430 N LYS A 433 22.150 11.536 64.065 1.00 30.29
ATOM 3431 CA LYS A 433 21.757 10.205 64.480 1.00 33.97
ATOM 3432 C LYS A 433 22.886 9.408 65.113 1.00 40.77
ATOM 3433 O LYS A 433 22.690 8.545 65.964 1.00 45.44
ATOM 3434 CB LYS A 433 21.017 9.429 63.418 1.00 41.36
ATOM 3435 CG LYS A 433 21.934 9.107 62.270 1.00 42.12
ATOM 3436 CD LYS A 433 21.340 9.569 60.951 1.00 85.11
ATOM 3437 CE LYS A 433 21.770 8.690 59.784 1.00100.00
ATOM 3438 NZ LYS A 433 21.052 8.990 58.530 1.00100.00
ATOM 3439 N ASP A 434 24.091 9.729 64.700 1.00 38.33
ATOM 3440 CA ASP A 434 25.295 9.086 65.188 1.00 40.98
ATOM 3441 C ASP A 434 25.640 9.549 66.594 1.00 42.43
ATOM 3442 O ASP A 434 26.508 8.979 67.241 1.00 42.35
ATOM 3443 CB ASP A 434 26.493 9.429 64.250 1.00 47.81
ATOM 3444 CG ASP A 434 26.762 10.919 64.034 1.00 73.28
ATOM 3445 OD1 ASP A 434 25.948 11.739 63.601 1.00 69.11
ATOM 3446 OD2 ASP A 434 28.007 11.242 64.314 1.00 80.38
ATOM 3447 N LYS A 435 24.987 10.601 67.068 1.00 33.72
ATOM 3448 CA LYS A 435 25.312 11.120 68.374 1.00 30.49
ATOM 3449 C LYS A 435 24.122 11.247 69.306 1.00 32.57
ATOM 3450 O LYS A 435 24.181 12.067 70.217 1.00 29.28
ATOM 3451 CB LYS A 435 26.018 12.465 68.200 1.00 30.20
ATOM 3452 CG LYS A 435 27.396 12.351 67.568 1.00 19.40
ATOM 3453 CD LYS A 435 27.984 13.718 67.237 1.00 28.53
ATOM 3454 CE LYS A 435 29.504 13.723 67.224 1.00 36.05
ATOM 3455 NZ LYS A 435 30.078 14.696 66.281 1.00 38.07
ATOM 3456 N VAL A 436 23.063 10.467 69.083 1.00 32.65
ATOM 3457 CA VAL A 436 21.867 10.565 69.920 1.00 36.68
ATOM 3458 C VAL A 436 22.189 10.528 71.391 1.00 39.39
ATOM 3459 O VAL A 436 21.544 11.154 72.236 1.00 34.16
ATOM 3460 CB VAL A 436 20.768 9.553 69.613 1.00 44.95
ATOM 3461 CG1 VAL A 436 20.016 9.971 68.355 1.00 45.77
ATOM 3462 CG2 VAL A 436 21.391 8.187 69.405 1.00 48.21
ATOM 3463 N ASP A 437 23.205 9.740 71.670 1.00 40.66
ATOM 3464 CA ASP A 437 23.663 9.569 73.019 1.00 39.64
ATOM 3465 C ASP A 437 24.119 10.875 73.622 1.00 35.59
ATOM 3466 O ASP A 437 23.871 11.128 74.785 1.00 36.38
ATOM 3467 CB ASP A 437 24.686 8.437 73.136 1.00 42.27

ATOM 3468 CG ASP A 437 23.976 7.123 73.303 1.00 64.05
ATOM 3469 OD1 ASP A 437 22.749 7.018 73.361 1.00 57.77
ATOM 3470 OD2 ASP A 437 24.825 6.121 73.385 1.00 89.95
ATOM 3471 N VAL A 438 24.778 11.697 72.826 1.00 33.10
ATOM 3472 CA VAL A 438 25.235 12.988 73.309 1.00 31.59
ATOM 3473 C VAL A 438 24.012 13.879 73.521 1.00 28.65
ATOM 3474 O VAL A 438 23.828 14.461 74.571 1.00 26.75
ATOM 3475 CB VAL A 438 26.289 13.599 72.371 1.00 30.58
ATOM 3476 CG1 VAL A 438 26.809 14.928 72.920 1.00 27.87
ATOM 3477 CG2 VAL A 438 27.441 12.608 72.226 1.00 29.01
ATOM 3478 N LEU A 439 23.179 13.926 72.494 1.00 22.69
ATOM 3479 CA LEU A 439 21.952 14.698 72.466 1.00 20.02
ATOM 3480 C LEU A 439 21.118 14.396 73.675 1.00 28.06
ATOM 3481 O LEU A 439 20.547 15.279 74.289 1.00 31.30
ATOM 3482 CB LEU A 439 21.125 14.403 71.201 1.00 17.24
ATOM 3483 CG LEU A 439 21.769 15.002 69.960 1.00 19.41
ATOM 3484 CD1 LEU A 439 21.029 14.542 68.724 1.00 16.82
ATOM 3485 CD2 LEU A 439 21.748 16.528 70.034 1.00 23.96
ATOM 3486 N ASN A 440 21.045 13.129 74.022 1.00 24.23
ATOM 3487 CA ASN A 440 20.242 12.765 75.165 1.00 24.80
ATOM 3488 C ASN A 440 20.785 13.294 76.473 1.00 29.26
ATOM 3489 O ASN A 440 20.128 13.233 77.507 1.00 31.02
ATOM 3490 CB ASN A 440 19.842 11.275 75.237 1.00 28.06
ATOM 3491 CG ASN A 440 18.971 10.884 74.066 1.00 29.31
ATOM 3492 OD1 ASN A 440 19.138 9.820 73.451 1.00 40.12
ATOM 3493 ND2 ASN A 440 18.058 11.773 73.721 1.00 28.40
ATOM 3494 N GLN A 441 21.984 13.833 76.434 1.00 26.30
ATOM 3495 CA GLN A 441 22.535 14.361 77.656 1.00 27.26
ATOM 3496 C GLN A 441 22.022 15.764 77.912 1.00 26.46
ATOM 3497 O GLN A 441 22.203 16.336 78.988 1.00 25.27
ATOM 3498 CB GLN A 441 24.073 14.404 77.609 1.00 32.14
ATOM 3499 CG GLN A 441 24.762 13.016 77.641 1.00 49.60
ATOM 3500 CD GLN A 441 26.057 13.019 76.850 1.00 66.63
ATOM 3501 OE1 GLN A 441 26.546 11.975 76.382 1.00 76.27
ATOM 3502 NE2 GLN A 441 26.608 14.217 76.676 1.00 56.68
ATOM 3503 N VAL A 442 21.388 16.345 76.909 1.00 21.59
ATOM 3504 CA VAL A 442 20.922 17.688 77.159 1.00 18.91
ATOM 3505 C VAL A 442 19.615 17.729 77.897 1.00 19.52
ATOM 3506 O VAL A 442 18.742 16.908 77.650 1.00 21.02
ATOM 3507 CB VAL A 442 20.898 18.538 75.917 1.00 19.77
ATOM 3508 CG1 VAL A 442 21.472 17.891 74.680 1.00 23.00
ATOM 3509 CG2 VAL A 442 19.787 19.580 75.787 1.00 13.26
ATOM 3510 N ASP A 443 19.490 18.677 78.811 1.00 17.20
ATOM 3511 CA ASP A 443 18.243 18.856 79.551 1.00 16.44
ATOM 3512 C ASP A 443 17.277 19.752 78.727 1.00 17.64
ATOM 3513 O ASP A 443 17.091 20.980 78.921 1.00 15.06
ATOM 3514 CB ASP A 443 18.611 19.494 80.901 1.00 17.40
ATOM 3515 CG ASP A 443 17.422 19.595 81.778 1.00 21.50
ATOM 3516 OD1 ASP A 443 16.309 19.286 81.395 1.00 26.57
ATOM 3517 OD2 ASP A 443 17.731 20.068 82.959 1.00 23.49
ATOM 3518 N TRP A 444 16.675 19.105 77.736 1.00 15.54
ATOM 3519 CA TRP A 444 15.763 19.759 76.816 1.00 16.92
ATOM 3520 C TRP A 444 14.641 20.468 77.546 1.00 19.29
ATOM 3521 O TRP A 444 14.292 21.572 77.194 1.00 18.00
ATOM 3522 CB TRP A 444 15.195 18.747 75.793 1.00 13.71
ATOM 3523 CG TRP A 444 16.267 18.226 74.892 1.00 14.88
ATOM 3524 CD1 TRP A 444 16.797 16.969 74.872 1.00 17.32
ATOM 3525 CD2 TRP A 444 16.952 18.958 73.861 1.00 16.34
ATOM 3526 NE1 TRP A 444 17.779 16.869 73.915 1.00 14.83
ATOM 3527 CE2 TRP A 444 17.880 18.063 73.255 1.00 16.96
ATOM 3528 CE3 TRP A 444 16.896 20.295 73.415 1.00 17.06

ATOM	3529	CZ2	TRP	A	444	18.737	18.482	72.229	1.00	16.95
ATOM	3530	CZ3	TRP	A	444	17.750	20.697	72.382	1.00	16.35
ATOM	3531	CH2	TRP	A	444	18.664	19.807	71.806	1.00	16.47
ATOM	3532	N	ASN	A	445	14.059	19.808	78.557	1.00	18.46
ATOM	3533	CA	ASN	A	445	12.957	20.414	79.260	1.00	17.22
ATOM	3534	C	ASN	A	445	13.334	21.761	79.837	1.00	20.45
ATOM	3535	O	ASN	A	445	12.581	22.732	79.740	1.00	17.51
ATOM	3536	CB	ASN	A	445	12.347	19.512	80.357	1.00	15.11
ATOM	3537	CG	ASN	A	445	11.322	20.272	81.234	1.00	46.40
ATOM	3538	OD1	ASN	A	445	11.526	20.515	82.448	1.00	39.99
ATOM	3539	ND2	ASN	A	445	10.198	20.671	80.643	1.00	26.34
ATOM	3540	N	ALA	A	446	14.504	21.791	80.484	1.00	18.70
ATOM	3541	CA	ALA	A	446	14.918	23.022	81.091	1.00	16.75
ATOM	3542	C	ALA	A	446	15.272	24.029	80.032	1.00	21.46
ATOM	3543	O	ALA	A	446	14.765	25.172	80.030	1.00	20.55
ATOM	3544	CB	ALA	A	446	16.049	22.774	82.055	1.00	19.42
ATOM	3545	N	TRP	A	447	16.116	23.605	79.097	1.00	16.36
ATOM	3546	CA	TRP	A	447	16.476	24.563	78.054	1.00	14.85
ATOM	3547	C	TRP	A	447	15.277	25.163	77.279	1.00	18.68
ATOM	3548	O	TRP	A	447	15.246	26.365	76.985	1.00	14.03
ATOM	3549	CB	TRP	A	447	17.473	23.938	77.040	1.00	17.25
ATOM	3550	CG	TRP	A	447	18.952	23.982	77.391	1.00	19.35
ATOM	3551	CD1	TRP	A	447	19.697	22.957	77.930	1.00	22.25
ATOM	3552	CD2	TRP	A	447	19.864	25.090	77.224	1.00	16.70
ATOM	3553	NE1	TRP	A	447	21.007	23.356	78.105	1.00	19.46
ATOM	3554	CE2	TRP	A	447	21.131	24.662	77.679	1.00	18.42
ATOM	3555	CE3	TRP	A	447	19.737	26.403	76.766	1.00	16.34
ATOM	3556	CZ2	TRP	A	447	22.241	25.512	77.625	1.00	16.76
ATOM	3557	CZ3	TRP	A	447	20.854	27.230	76.705	1.00	14.87
ATOM	3558	CH2	TRP	A	447	22.090	26.786	77.141	1.00	14.22
ATOM	3559	N	LEU	A	448	14.275	24.336	76.899	1.00	14.96
ATOM	3560	CA	LEU	A	448	13.146	24.835	76.096	1.00	16.27
ATOM	3561	C	LEU	A	448	11.995	25.464	76.877	1.00	17.91
ATOM	3562	O	LEU	A	448	11.332	26.404	76.398	1.00	13.49
ATOM	3563	CB	LEU	A	448	12.522	23.690	75.238	1.00	16.42
ATOM	3564	CG	LEU	A	448	13.500	22.945	74.302	1.00	16.43
ATOM	3565	CD1	LEU	A	448	12.845	21.795	73.536	1.00	15.65
ATOM	3566	CD2	LEU	A	448	14.163	23.901	73.315	1.00	12.87
ATOM	3567	N	TYR	A	449	11.733	24.874	78.048	1.00	15.32
ATOM	3568	CA	TYR	A	449	10.557	25.255	78.826	1.00	15.36
ATOM	3569	C	TYR	A	449	10.763	25.822	80.198	1.00	19.93
ATOM	3570	O	TYR	A	449	9.763	26.226	80.806	1.00	21.29
ATOM	3571	CB	TYR	A	449	9.611	24.031	78.983	1.00	14.65
ATOM	3572	CG	TYR	A	449	9.473	23.315	77.667	1.00	17.69
ATOM	3573	CD1	TYR	A	449	9.117	24.048	76.533	1.00	22.12
ATOM	3574	CD2	TYR	A	449	9.771	21.958	77.541	1.00	19.27
ATOM	3575	CE1	TYR	A	449	9.010	23.432	75.286	1.00	21.15
ATOM	3576	CE2	TYR	A	449	9.669	21.318	76.301	1.00	18.29
ATOM	3577	CZ	TYR	A	449	9.301	22.070	75.183	1.00	25.71
ATOM	3578	OH	TYR	A	449	9.216	21.480	73.951	1.00	26.15
ATOM	3579	N	SER	A	450	11.985	25.806	80.724	1.00	15.79
ATOM	3580	CA	SER	A	450	12.156	26.362	82.061	1.00	14.12
ATOM	3581	C	SER	A	450	12.474	27.864	82.025	1.00	16.42
ATOM	3582	O	SER	A	450	13.127	28.340	81.109	1.00	15.32
ATOM	3583	CB	SER	A	450	13.136	25.567	82.938	1.00	20.04
ATOM	3584	OG	SER	A	450	12.687	24.254	83.189	1.00	16.61
ATOM	3585	N	PRO	A	451	11.995	28.645	83.014	1.00	14.16
ATOM	3586	CA	PRO	A	451	12.287	30.052	83.032	1.00	12.96
ATOM	3587	C	PRO	A	451	13.696	30.228	83.581	1.00	15.11
ATOM	3588	O	PRO	A	451	14.347	29.259	83.997	1.00	15.64
ATOM	3589	CB	PRO	A	451	11.274	30.669	84.029	1.00	11.76

ATOM 3590 CG PRO A 451 10.903 29.560 84.988 1.00 16.01
ATOM 3591 CD PRO A 451 11.298 28.259 84.288 1.00 15.25
ATOM 3592 N GLY A 452 14.148 31.481 83.586 1.00 12.85
ATOM 3593 CA GLY A 452 15.430 31.822 84.160 1.00 12.46
ATOM 3594 C GLY A 452 16.652 31.517 83.311 1.00 17.53
ATOM 3595 O GLY A 452 16.559 31.320 82.117 1.00 14.38
ATOM 3596 N LEU A 453 17.839 31.539 83.926 1.00 17.18
ATOM 3597 CA LEU A 453 19.054 31.268 83.196 1.00 14.53
ATOM 3598 C LEU A 453 19.087 29.819 82.762 1.00 14.71
ATOM 3599 O LEU A 453 18.523 28.978 83.456 1.00 16.06
ATOM 3600 CB LEU A 453 20.296 31.588 84.031 1.00 14.09
ATOM 3601 CG LEU A 453 20.526 33.091 84.216 1.00 18.81
ATOM 3602 CD1 LEU A 453 21.635 33.253 85.247 1.00 16.98
ATOM 3603 CD2 LEU A 453 21.001 33.761 82.919 1.00 21.45
ATOM 3604 N PRO A 454 19.770 29.537 81.637 1.00 15.62
ATOM 3605 CA PRO A 454 19.907 28.194 81.119 1.00 15.68
ATOM 3606 C PRO A 454 20.486 27.258 82.170 1.00 21.35
ATOM 3607 O PRO A 454 21.236 27.662 83.039 1.00 21.73
ATOM 3608 CB PRO A 454 20.918 28.317 79.965 1.00 16.56
ATOM 3609 CG PRO A 454 20.906 29.751 79.501 1.00 16.74
ATOM 3610 CD PRO A 454 20.290 30.524 80.640 1.00 15.71
ATOM 3611 N PRO A 455 20.146 25.978 82.079 1.00 16.53
ATOM 3612 CA PRO A 455 20.619 24.976 83.005 1.00 16.33
ATOM 3613 C PRO A 455 22.146 24.834 83.016 1.00 25.51
ATOM 3614 O PRO A 455 22.718 24.370 83.999 1.00 24.17
ATOM 3615 CB PRO A 455 19.999 23.666 82.520 1.00 17.40
ATOM 3616 CG PRO A 455 19.523 23.888 81.094 1.00 21.81
ATOM 3617 CD PRO A 455 19.403 25.389 80.932 1.00 19.90
ATOM 3618 N ILE A 456 22.816 25.205 81.916 1.00 20.88
ATOM 3619 CA ILE A 456 24.262 25.117 81.810 1.00 17.40
ATOM 3620 C ILE A 456 24.822 26.292 81.000 1.00 19.27
ATOM 3621 O ILE A 456 24.191 26.798 80.064 1.00 17.96
ATOM 3622 CB ILE A 456 24.675 23.737 81.316 1.00 23.45
ATOM 3623 CG1 ILE A 456 26.173 23.543 81.456 1.00 27.66
ATOM 3624 CG2 ILE A 456 24.285 23.529 79.865 1.00 26.37
ATOM 3625 CD1 ILE A 456 26.571 22.167 80.951 1.00 35.97
ATOM 3626 N LYS A 457 26.011 26.772 81.383 1.00 15.81
ATOM 3627 CA LYS A 457 26.649 27.883 80.697 1.00 17.12
ATOM 3628 C LYS A 457 27.727 27.333 79.815 1.00 18.91
ATOM 3629 O LYS A 457 28.541 26.562 80.281 1.00 17.84
ATOM 3630 CB LYS A 457 27.308 28.793 81.727 1.00 16.24
ATOM 3631 CG LYS A 457 27.896 30.067 81.130 1.00 16.93
ATOM 3632 CD LYS A 457 28.245 31.062 82.227 1.00 10.77
ATOM 3633 CE LYS A 457 28.785 32.347 81.659 1.00 11.49
ATOM 3634 NZ LYS A 457 29.467 33.164 82.683 1.00 18.20
ATOM 3635 N PRO A 458 27.733 27.708 78.558 1.00 15.31
ATOM 3636 CA PRO A 458 28.780 27.205 77.655 1.00 13.94
ATOM 3637 C PRO A 458 30.169 27.681 78.096 1.00 16.97
ATOM 3638 O PRO A 458 30.341 28.456 79.036 1.00 14.39
ATOM 3639 CB PRO A 458 28.465 27.835 76.274 1.00 13.66
ATOM 3640 CG PRO A 458 27.036 28.364 76.363 1.00 14.88
ATOM 3641 CD PRO A 458 26.702 28.535 77.855 1.00 10.08
ATOM 3642 N ASN A 459 31.199 27.223 77.408 1.00 17.07
ATOM 3643 CA ASN A 459 32.546 27.672 77.722 1.00 15.61
ATOM 3644 C ASN A 459 32.924 28.839 76.793 1.00 22.19
ATOM 3645 O ASN A 459 32.647 28.812 75.578 1.00 20.83
ATOM 3646 CB ASN A 459 33.580 26.559 77.455 1.00 19.60
ATOM 3647 CG ASN A 459 33.158 25.288 78.136 1.00 26.10
ATOM 3648 OD1 ASN A 459 32.952 25.278 79.347 1.00 25.15
ATOM 3649 ND2 ASN A 459 32.972 24.236 77.361 1.00 24.39
ATOM 3650 N TYR A 460 33.620 29.849 77.341 1.00 13.51

ATOM 3651 CA TYR A 460 34.021 30.994 76.536 1.00 14.52
ATOM 3652 C TYR A 460 35.485 31.370 76.683 1.00 16.97
ATOM 3653 O TYR A 460 36.003 31.442 77.802 1.00 13.34
ATOM 3654 CB TYR A 460 33.266 32.254 76.990 1.00 12.53
ATOM 3655 CG TYR A 460 31.764 32.129 76.980 1.00 13.07
ATOM 3656 CD1 TYR A 460 31.070 31.553 78.046 1.00 17.79
ATOM 3657 CD2 TYR A 460 31.043 32.584 75.880 1.00 12.08
ATOM 3658 CE1 TYR A 460 29.677 31.450 78.049 1.00 16.54
ATOM 3659 CE2 TYR A 460 29.654 32.477 75.861 1.00 11.82
ATOM 3660 CZ TYR A 460 28.971 31.911 76.938 1.00 16.71
ATOM 3661 OH TYR A 460 27.589 31.834 76.894 1.00 15.52
ATOM 3662 N ASP A 461 36.098 31.706 75.558 1.00 13.99
ATOM 3663 CA ASP A 461 37.463 32.218 75.579 1.00 13.74
ATOM 3664 C ASP A 461 37.414 33.608 76.255 1.00 16.51
ATOM 3665 O ASP A 461 36.516 34.415 75.966 1.00 15.04
ATOM 3666 CB ASP A 461 37.968 32.336 74.133 1.00 12.98
ATOM 3667 CG ASP A 461 39.393 32.801 74.148 1.00 25.31
ATOM 3668 OD1 ASP A 461 40.335 32.064 74.314 1.00 40.40
ATOM 3669 OD2 ASP A 461 39.520 34.087 74.051 1.00 19.41
ATOM 3670 N MET A 462 38.339 33.887 77.191 1.00 12.14
ATOM 3671 CA MET A 462 38.359 35.144 77.928 1.00 9.92
ATOM 3672 C MET A 462 39.312 36.203 77.406 1.00 15.43
ATOM 3673 O MET A 462 39.413 37.265 77.958 1.00 15.61
ATOM 3674 CB MET A 462 38.688 34.910 79.404 1.00 9.27
ATOM 3675 CG MET A 462 37.716 33.909 79.977 1.00 13.43
ATOM 3676 SD MET A 462 36.053 34.635 80.074 1.00 19.12
ATOM 3677 CE MET A 462 36.505 35.919 81.264 1.00 17.88
ATOM 3678 N THR A 463 40.037 35.922 76.347 1.00 13.87
ATOM 3679 CA THR A 463 41.004 36.860 75.849 1.00 12.21
ATOM 3680 C THR A 463 40.675 38.339 75.910 1.00 16.34
ATOM 3681 O THR A 463 41.365 39.106 76.567 1.00 16.05
ATOM 3682 CB THR A 463 41.595 36.434 74.489 1.00 17.83
ATOM 3683 OG1 THR A 463 41.940 35.051 74.538 1.00 14.22
ATOM 3684 CG2 THR A 463 42.841 37.298 74.204 1.00 15.70
ATOM 3685 N LEU A 464 39.679 38.762 75.136 1.00 14.21
ATOM 3686 CA LEU A 464 39.262 40.154 75.060 1.00 13.52
ATOM 3687 C LEU A 464 38.408 40.679 76.228 1.00 12.70
ATOM 3688 O LEU A 464 38.259 41.881 76.442 1.00 15.39
ATOM 3689 CB LEU A 464 38.508 40.348 73.725 1.00 13.87
ATOM 3690 CG LEU A 464 39.363 40.009 72.495 1.00 18.04
ATOM 3691 CD1 LEU A 464 38.448 40.076 71.260 1.00 14.36
ATOM 3692 CD2 LEU A 464 40.490 41.054 72.345 1.00 17.86
ATOM 3693 N THR A 465 37.808 39.770 76.979 1.00 11.81
ATOM 3694 CA THR A 465 36.946 40.116 78.103 1.00 10.62
ATOM 3695 C THR A 465 37.728 40.487 79.360 1.00 17.70
ATOM 3696 O THR A 465 37.361 41.359 80.131 1.00 15.35
ATOM 3697 CB THR A 465 35.996 38.934 78.368 1.00 12.56
ATOM 3698 OG1 THR A 465 35.209 38.765 77.199 1.00 16.68
ATOM 3699 CG2 THR A 465 35.075 39.241 79.545 1.00 17.17
ATOM 3700 N ASN A 466 38.828 39.785 79.584 1.00 14.17
ATOM 3701 CA ASN A 466 39.639 40.017 80.738 1.00 14.86
ATOM 3702 C ASN A 466 39.933 41.491 81.017 1.00 16.02
ATOM 3703 O ASN A 466 39.843 41.892 82.177 1.00 17.05
ATOM 3704 CB ASN A 466 40.942 39.197 80.694 1.00 14.48
ATOM 3705 CG ASN A 466 40.787 37.705 80.932 1.00 22.10
ATOM 3706 OD1 ASN A 466 41.539 36.878 80.386 1.00 21.72
ATOM 3707 ND2 ASN A 466 39.925 37.356 81.852 1.00 11.12
ATOM 3708 N ALA A 467 40.313 42.307 80.012 1.00 16.17
ATOM 3709 CA ALA A 467 40.614 43.704 80.336 1.00 16.10
ATOM 3710 C ALA A 467 39.394 44.448 80.871 1.00 20.19
ATOM 3711 O ALA A 467 39.488 45.363 81.722 1.00 17.63

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ATOM	3712	CB	ALA	A	467	41.159	44.411	79.118	1.00	14.71
ATOM	3713	N	CYS	A	468	38.227	44.022	80.343	1.00	15.87
ATOM	3714	CA	CYS	A	468	36.938	44.608	80.712	1.00	13.86
ATOM	3715	C	CYS	A	468	36.609	44.369	82.167	1.00	15.16
ATOM	3716	O	CYS	A	468	36.229	45.234	82.931	1.00	17.79
ATOM	3717	CB	CYS	A	468	35.820	44.045	79.808	1.00	11.73
ATOM	3718	SG	CYS	A	468	36.215	44.458	78.102	1.00	15.87
ATOM	3719	N	ILE	A	469	36.811	43.145	82.571	1.00	13.83
ATOM	3720	CA	ILE	A	469	36.531	42.747	83.941	1.00	11.80
ATOM	3721	C	ILE	A	469	37.488	43.393	84.910	1.00	16.06
ATOM	3722	O	ILE	A	469	37.076	43.848	85.970	1.00	18.22
ATOM	3723	CB	ILE	A	469	36.659	41.230	84.042	1.00	15.30
ATOM	3724	CG1	ILE	A	469	35.527	40.557	83.263	1.00	19.73
ATOM	3725	CG2	ILE	A	469	36.688	40.791	85.497	1.00	11.46
ATOM	3726	CD1	ILE	A	469	35.788	39.073	82.977	1.00	25.13
ATOM	3727	N	ALA	A	470	38.776	43.375	84.572	1.00	12.77
ATOM	3728	CA	ALA	A	470	39.729	43.967	85.475	1.00	11.93
ATOM	3729	C	ALA	A	470	39.304	45.404	85.786	1.00	14.05
ATOM	3730	O	ALA	A	470	39.264	45.860	86.941	1.00	15.14
ATOM	3731	CB	ALA	A	470	41.078	43.982	84.759	1.00	12.54
ATOM	3732	N	LEU	A	471	38.979	46.120	84.708	1.00	15.25
ATOM	3733	CA	LEU	A	471	38.585	47.538	84.796	1.00	13.62
ATOM	3734	C	LEU	A	471	37.257	47.792	85.510	1.00	17.64
ATOM	3735	O	LEU	A	471	37.144	48.630	86.411	1.00	13.08
ATOM	3736	CB	LEU	A	471	38.685	48.274	83.442	1.00	11.79
ATOM	3737	CG	LEU	A	471	38.684	49.803	83.614	1.00	15.97
ATOM	3738	CD1	LEU	A	471	39.855	50.262	84.497	1.00	12.47
ATOM	3739	CD2	LEU	A	471	38.753	50.493	82.248	1.00	17.27
ATOM	3740	N	SER	A	472	36.220	47.049	85.137	1.00	14.37
ATOM	3741	CA	SER	A	472	34.963	47.264	85.808	1.00	11.84
ATOM	3742	C	SER	A	472	35.082	46.900	87.284	1.00	18.13
ATOM	3743	O	SER	A	472	34.533	47.581	88.145	1.00	16.29
ATOM	3744	CB	SER	A	472	33.822	46.488	85.153	1.00	12.21
ATOM	3745	OG	SER	A	472	34.090	45.121	85.240	1.00	18.74
ATOM	3746	N	GLN	A	473	35.761	45.804	87.615	1.00	12.67
ATOM	3747	CA	GLN	A	473	35.886	45.455	89.028	1.00	10.49
ATOM	3748	C	GLN	A	473	36.615	46.538	89.813	1.00	12.50
ATOM	3749	O	GLN	A	473	36.278	46.879	90.950	1.00	12.44
ATOM	3750	CB	GLN	A	473	36.649	44.137	89.180	1.00	13.06
ATOM	3751	CG	GLN	A	473	35.730	42.908	89.040	1.00	20.04
ATOM	3752	CD	GLN	A	473	34.634	42.874	90.108	1.00	19.81
ATOM	3753	OE1	GLN	A	473	34.917	42.605	91.270	1.00	30.46
ATOM	3754	NE2	GLN	A	473	33.387	43.130	89.742	1.00	21.25
ATOM	3755	N	ARG	A	474	37.656	47.087	89.183	1.00	14.11
ATOM	3756	CA	ARG	A	474	38.400	48.158	89.868	1.00	17.39
ATOM	3757	C	ARG	A	474	37.478	49.325	90.235	1.00	21.36
ATOM	3758	O	ARG	A	474	37.577	49.922	91.304	1.00	18.76
ATOM	3759	CB	ARG	A	474	39.532	48.719	89.034	1.00	11.27
ATOM	3760	CG	ARG	A	474	40.786	47.842	89.038	1.00	17.88
ATOM	3761	CD	ARG	A	474	41.727	48.283	87.928	1.00	21.70
ATOM	3762	NE	ARG	A	474	42.122	49.665	88.177	1.00	19.49
ATOM	3763	CZ	ARG	A	474	42.837	50.419	87.361	1.00	31.34
ATOM	3764	NH1	ARG	A	474	43.239	49.918	86.190	1.00	25.99
ATOM	3765	NH2	ARG	A	474	43.160	51.679	87.742	1.00	17.92
ATOM	3766	N	TRP	A	475	36.602	49.686	89.306	1.00	14.64
ATOM	3767	CA	TRP	A	475	35.683	50.774	89.542	1.00	13.85
ATOM	3768	C	TRP	A	475	34.608	50.352	90.524	1.00	18.33
ATOM	3769	O	TRP	A	475	34.250	51.076	91.430	1.00	15.30
ATOM	3770	CB	TRP	A	475	35.033	51.236	88.235	1.00	13.65
ATOM	3771	CG	TRP	A	475	35.867	52.222	87.479	1.00	14.81
ATOM	3772	CD1	TRP	A	475	36.645	51.943	86.399	1.00	17.78

ATOM	3773	CD2	TRP	A	475	36.007	53.640	87.742	1.00	14.88
ATOM	3774	NE1	TRP	A	475	37.284	53.090	85.976	1.00	18.25
ATOM	3775	CE2	TRP	A	475	36.885	54.152	86.756	1.00	20.66
ATOM	3776	CE3	TRP	A	475	35.464	54.518	88.694	1.00	15.98
ATOM	3777	CZ2	TRP	A	475	37.243	55.511	86.714	1.00	19.78
ATOM	3778	CZ3	TRP	A	475	35.839	55.853	88.665	1.00	18.27
ATOM	3779	CH2	TRP	A	475	36.723	56.341	87.682	1.00	18.20
ATOM	3780	N	ILE	A	476	34.081	49.157	90.362	1.00	15.43
ATOM	3781	CA	ILE	A	476	33.027	48.713	91.251	1.00	15.88
ATOM	3782	C	ILE	A	476	33.508	48.628	92.684	1.00	21.66
ATOM	3783	O	ILE	A	476	32.742	48.833	93.614	1.00	20.18
ATOM	3784	CB	ILE	A	476	32.498	47.354	90.775	1.00	16.74
ATOM	3785	CG1	ILE	A	476	31.692	47.485	89.497	1.00	13.74
ATOM	3786	CG2	ILE	A	476	31.697	46.620	91.844	1.00	17.08
ATOM	3787	CD1	ILE	A	476	31.568	46.130	88.810	1.00	22.82
ATOM	3788	N	THR	A	477	34.780	48.321	92.886	1.00	18.89
ATOM	3789	CA	THR	A	477	35.286	48.193	94.256	1.00	15.92
ATOM	3790	C	THR	A	477	36.151	49.355	94.708	1.00	17.65
ATOM	3791	O	THR	A	477	36.711	49.333	95.792	1.00	17.49
ATOM	3792	CB	THR	A	477	36.132	46.904	94.384	1.00	21.13
ATOM	3793	OG1	THR	A	477	37.296	46.986	93.545	1.00	19.88
ATOM	3794	CG2	THR	A	477	35.268	45.673	94.035	1.00	16.31
ATOM	3795	N	ALA	A	478	36.302	50.369	93.884	1.00	18.44
ATOM	3796	CA	ALA	A	478	37.131	51.548	94.191	1.00	16.94
ATOM	3797	C	ALA	A	478	36.729	52.219	95.490	1.00	20.18
ATOM	3798	O	ALA	A	478	35.552	52.233	95.863	1.00	19.40
ATOM	3799	CB	ALA	A	478	37.017	52.608	93.077	1.00	15.66
ATOM	3800	N	LYS	A	479	37.753	52.763	96.148	1.00	17.33
ATOM	3801	CA	LYS	A	479	37.654	53.518	97.371	1.00	15.43
ATOM	3802	C	LYS	A	479	38.196	54.907	97.115	1.00	19.77
ATOM	3803	O	LYS	A	479	38.757	55.192	96.073	1.00	16.97
ATOM	3804	CB	LYS	A	479	38.325	52.853	98.562	1.00	17.71
ATOM	3805	CG	LYS	A	479	37.468	51.685	99.049	1.00	25.29
ATOM	3806	CD	LYS	A	479	38.002	51.058	100.324	1.00	28.77
ATOM	3807	CE	LYS	A	479	36.895	50.623	101.280	1.00	75.63
ATOM	3808	NZ	LYS	A	479	36.090	49.481	100.815	1.00	66.83
ATOM	3809	N	GLU	A	480	38.010	55.793	98.068	1.00	19.41
ATOM	3810	CA	GLU	A	480	38.497	57.120	97.853	1.00	19.30
ATOM	3811	C	GLU	A	480	39.933	57.069	97.387	1.00	21.25
ATOM	3812	O	GLU	A	480	40.321	57.802	96.489	1.00	21.38
ATOM	3813	CB	GLU	A	480	38.457	57.901	99.183	1.00	21.20
ATOM	3814	CG	GLU	A	480	37.322	58.931	99.171	1.00	53.93
ATOM	3815	CD	GLU	A	480	37.505	59.998	98.131	1.00	100.00
ATOM	3816	OE1	GLU	A	480	38.596	60.401	97.756	1.00	100.00
ATOM	3817	OE2	GLU	A	480	36.360	60.456	97.684	1.00	100.00
ATOM	3818	N	ASP	A	481	40.730	56.249	98.059	1.00	15.59
ATOM	3819	CA	ASP	A	481	42.120	56.150	97.734	1.00	17.58
ATOM	3820	C	ASP	A	481	42.463	55.609	96.372	1.00	22.00
ATOM	3821	O	ASP	A	481	43.639	55.651	96.002	1.00	21.23
ATOM	3822	CB	ASP	A	481	42.966	55.475	98.824	1.00	22.35
ATOM	3823	CG	ASP	A	481	42.845	53.974	98.879	1.00	26.70
ATOM	3824	OD1	ASP	A	481	42.040	53.276	98.295	1.00	22.31
ATOM	3825	OD2	ASP	A	481	43.769	53.466	99.638	1.00	19.37
ATOM	3826	N	ASP	A	482	41.483	55.147	95.608	1.00	16.23
ATOM	3827	CA	ASP	A	482	41.795	54.667	94.250	1.00	15.66
ATOM	3828	C	ASP	A	482	41.485	55.667	93.144	1.00	20.38
ATOM	3829	O	ASP	A	482	41.994	55.549	92.031	1.00	19.78
ATOM	3830	CB	ASP	A	482	41.058	53.340	93.885	1.00	16.37
ATOM	3831	CG	ASP	A	482	41.360	52.283	94.918	1.00	14.59
ATOM	3832	OD1	ASP	A	482	42.463	51.867	95.146	1.00	16.94
ATOM	3833	OD2	ASP	A	482	40.338	51.972	95.654	1.00	17.55

ATOM 3834 N LEU A 483 40.627 56.645 93.423 1.00 17.94
ATOM 3835 CA LEU A 483 40.167 57.591 92.403 1.00 14.70
ATOM 3836 C LEU A 483 41.214 58.319 91.581 1.00 21.17
ATOM 3837 O LEU A 483 41.122 58.519 90.368 1.00 21.03
ATOM 3838 CB LEU A 483 39.110 58.581 92.960 1.00 13.43
ATOM 3839 CG LEU A 483 37.870 57.925 93.558 1.00 15.53
ATOM 3840 CD1 LEU A 483 36.970 59.020 94.114 1.00 19.32
ATOM 3841 CD2 LEU A 483 37.047 57.172 92.512 1.00 16.27
ATOM 3842 N ASN A 484 42.220 58.761 92.289 1.00 19.63
ATOM 3843 CA ASN A 484 43.274 59.541 91.713 1.00 19.74
ATOM 3844 C ASN A 484 44.128 58.789 90.738 1.00 21.84
ATOM 3845 O ASN A 484 44.723 59.343 89.827 1.00 20.30
ATOM 3846 CB ASN A 484 44.110 60.036 92.891 1.00 34.83
ATOM 3847 CG ASN A 484 45.382 60.719 92.449 1.00100.00
ATOM 3848 OD1 ASN A 484 45.345 61.686 91.662 1.00 87.99
ATOM 3849 ND2 ASN A 484 46.510 60.200 92.946 1.00100.00
ATOM 3850 N SER A 485 44.183 57.510 90.918 1.00 17.69
ATOM 3851 CA SER A 485 44.986 56.711 90.020 1.00 19.64
ATOM 3852 C SER A 485 44.283 56.335 88.728 1.00 22.88
ATOM 3853 O SER A 485 44.965 55.937 87.778 1.00 23.74
ATOM 3854 CB SER A 485 45.543 55.508 90.752 1.00 26.03
ATOM 3855 OG SER A 485 45.864 55.954 92.057 1.00 52.22
ATOM 3856 N PHE A 486 42.948 56.451 88.650 1.00 15.68
ATOM 3857 CA PHE A 486 42.367 56.105 87.371 1.00 17.12
ATOM 3858 C PHE A 486 42.879 57.120 86.403 1.00 16.98
ATOM 3859 O PHE A 486 43.165 58.236 86.812 1.00 15.87
ATOM 3860 CB PHE A 486 40.827 56.088 87.376 1.00 18.47
ATOM 3861 CG PHE A 486 40.270 54.950 88.181 1.00 17.85
ATOM 3862 CD1 PHE A 486 40.325 53.646 87.686 1.00 17.48
ATOM 3863 CD2 PHE A 486 39.669 55.169 89.423 1.00 19.85
ATOM 3864 CE1 PHE A 486 39.790 52.599 88.441 1.00 18.74
ATOM 3865 CE2 PHE A 486 39.119 54.139 90.189 1.00 19.10
ATOM 3866 CZ PHE A 486 39.208 52.839 89.689 1.00 17.75
ATOM 3867 N ASN A 487 42.965 56.744 85.140 1.00 16.22
ATOM 3868 CA ASN A 487 43.499 57.636 84.141 1.00 20.09
ATOM 3869 C ASN A 487 43.100 57.184 82.746 1.00 23.67
ATOM 3870 O ASN A 487 42.770 56.024 82.522 1.00 22.60
ATOM 3871 CB ASN A 487 45.058 57.575 84.255 1.00 21.63
ATOM 3872 CG ASN A 487 45.776 58.616 83.415 1.00 32.80
ATOM 3873 OD1 ASN A 487 45.901 58.498 82.202 1.00 29.22
ATOM 3874 ND2 ASN A 487 46.159 59.725 84.021 1.00 31.52
ATOM 3875 N ALA A 488 43.145 58.126 81.800 1.00 23.87
ATOM 3876 CA ALA A 488 42.808 57.829 80.411 1.00 24.07
ATOM 3877 C ALA A 488 43.673 56.703 79.873 1.00 30.63
ATOM 3878 O ALA A 488 43.336 55.962 78.958 1.00 33.83
ATOM 3879 CB ALA A 488 42.978 59.086 79.574 1.00 26.14
ATOM 3880 N THR A 489 44.835 56.532 80.467 1.00 25.63
ATOM 3881 CA THR A 489 45.666 55.468 79.987 1.00 22.82
ATOM 3882 C THR A 489 44.976 54.168 80.210 1.00 24.75
ATOM 3883 O THR A 489 45.323 53.163 79.615 1.00 26.26
ATOM 3884 CB THR A 489 47.017 55.459 80.691 1.00 29.64
ATOM 3885 OG1 THR A 489 46.814 55.537 82.076 1.00 29.43
ATOM 3886 CG2 THR A 489 47.774 56.684 80.231 1.00 35.78
ATOM 3887 N ASP A 490 43.999 54.180 81.097 1.00 21.60
ATOM 3888 CA ASP A 490 43.288 52.946 81.362 1.00 20.54
ATOM 3889 C ASP A 490 42.628 52.391 80.104 1.00 14.90
ATOM 3890 O ASP A 490 42.363 51.207 80.013 1.00 18.94
ATOM 3891 CB ASP A 490 42.188 53.100 82.462 1.00 18.42
ATOM 3892 CG ASP A 490 42.764 53.483 83.785 1.00 21.60
ATOM 3893 OD1 ASP A 490 43.865 53.165 84.170 1.00 22.97
ATOM 3894 OD2 ASP A 490 41.930 54.124 84.534 1.00 18.24

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ATOM   3895  N   LEU A 491      42.309  53.262  79.180  1.00 14.42
ATOM   3896  CA  LEU A 491      41.571  52.910  77.971  1.00 18.63
ATOM   3897  C   LEU A 491      42.404  52.634  76.735  1.00 26.17
ATOM   3898  O   LEU A 491      41.863  52.350  75.689  1.00 23.53
ATOM   3899  CB  LEU A 491      40.626  54.065  77.600  1.00 16.48
ATOM   3900  CG  LEU A 491      39.793  54.553  78.786  1.00 17.62
ATOM   3901  CD1 LEU A 491      38.719  55.504  78.256  1.00 18.61
ATOM   3902  CD2 LEU A 491      39.164  53.341  79.481  1.00 10.99
ATOM   3903  N   LYS A 492      43.697  52.773  76.906  1.00 25.72
ATOM   3904  CA  LYS A 492      44.773  52.625  75.944  1.00 29.38
ATOM   3905  C   LYS A 492      44.601  51.464  74.987  1.00 26.62
ATOM   3906  O   LYS A 492      44.640  51.598  73.769  1.00 25.36
ATOM   3907  CB  LYS A 492      46.051  52.369  76.768  1.00 39.68
ATOM   3908  CG  LYS A 492      47.400  52.731  76.164  1.00 74.03
ATOM   3909  CD  LYS A 492      48.535  52.573  77.175  1.00 92.88
ATOM   3910  CE  LYS A 492      49.162  51.184  77.249  1.00100.00
ATOM   3911  NZ  LYS A 492      50.629  51.214  77.397  1.00100.00
ATOM   3912  N   ASP A 493      44.504  50.271  75.514  1.00 22.05
ATOM   3913  CA  ASP A 493      44.400  49.213  74.525  1.00 25.28
ATOM   3914  C   ASP A 493      43.008  48.604  74.421  1.00 31.85
ATOM   3915  O   ASP A 493      42.844  47.411  74.178  1.00 31.64
ATOM   3916  CB  ASP A 493      45.414  48.126  74.874  1.00 30.29
ATOM   3917  CG  ASP A 493      46.803  48.680  74.973  1.00 47.27
ATOM   3918  OD1 ASP A 493      47.322  49.280  74.036  1.00 49.99
ATOM   3919  OD2 ASP A 493      47.334  48.481  76.167  1.00 45.03
ATOM   3920  N   LEU A 494      41.989  49.430  74.622  1.00 23.95
ATOM   3921  CA  LEU A 494      40.633  48.920  74.576  1.00 19.08
ATOM   3922  C   LEU A 494      39.939  49.350  73.295  1.00 21.27
ATOM   3923  O   LEU A 494      39.960  50.537  72.963  1.00 22.24
ATOM   3924  CB  LEU A 494      39.833  49.421  75.800  1.00 16.85
ATOM   3925  CG  LEU A 494      40.346  48.949  77.145  1.00 19.46
ATOM   3926  CD1 LEU A 494      39.307  49.363  78.182  1.00 18.39
ATOM   3927  CD2 LEU A 494      40.511  47.422  77.183  1.00 20.77
ATOM   3928  N   SER A 495      39.320  48.401  72.573  1.00 17.36
ATOM   3929  CA  SER A 495      38.594  48.790  71.382  1.00 16.04
ATOM   3930  C   SER A 495      37.256  49.395  71.854  1.00 16.87
ATOM   3931  O   SER A 495      36.902  49.328  73.042  1.00 13.30
ATOM   3932  CB  SER A 495      38.253  47.547  70.576  1.00 16.67
ATOM   3933  OG  SER A 495      37.477  46.701  71.422  1.00 17.37
ATOM   3934  N   SER A 496      36.496  49.950  70.922  1.00 14.14
ATOM   3935  CA  SER A 496      35.200  50.501  71.254  1.00 16.64
ATOM   3936  C   SER A 496      34.316  49.365  71.794  1.00 17.90
ATOM   3937  O   SER A 496      33.495  49.589  72.680  1.00 16.25
ATOM   3938  CB  SER A 496      34.553  51.190  70.050  1.00 17.35
ATOM   3939  OG  SER A 496      34.309  50.183  69.105  1.00 23.79
ATOM   3940  N   HIS A 497      34.522  48.136  71.274  1.00 15.34
ATOM   3941  CA  HIS A 497      33.794  46.965  71.729  1.00 13.46
ATOM   3942  C   HIS A 497      33.999  46.671  73.224  1.00 17.45
ATOM   3943  O   HIS A 497      33.120  46.277  73.992  1.00 17.69
ATOM   3944  CB  HIS A 497      34.211  45.761  70.874  1.00 13.79
ATOM   3945  CG  HIS A 497      33.804  46.004  69.470  1.00 20.43
ATOM   3946  ND1 HIS A 497      34.738  46.342  68.482  1.00 24.52
ATOM   3947  CD2 HIS A 497      32.551  46.044  68.930  1.00 21.08
ATOM   3948  CE1 HIS A 497      34.039  46.531  67.358  1.00 21.87
ATOM   3949  NE2 HIS A 497      32.725  46.363  67.602  1.00 23.02
ATOM   3950  N   GLN A 498      35.230  46.833  73.662  1.00 14.00
ATOM   3951  CA  GLN A 498      35.633  46.593  75.029  1.00 10.78
ATOM   3952  C   GLN A 498      35.180  47.697  75.968  1.00 13.63
ATOM   3953  O   GLN A 498      34.829  47.449  77.118  1.00 13.35
ATOM   3954  CB  GLN A 498      37.156  46.416  75.038  1.00 11.59
ATOM   3955  CG  GLN A 498      37.585  45.026  74.488  1.00 14.99
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ATOM 3956 CD GLN A 498 39.101 44.938 74.454 1.00 21.92
ATOM 3957 OE1 GLN A 498 39.746 45.833 73.897 1.00 18.12
ATOM 3958 NE2 GLN A 498 39.685 43.957 75.117 1.00 11.55
ATOM 3959 N LEU A 499 35.200 48.942 75.490 1.00 16.63
ATOM 3960 CA LEU A 499 34.712 50.095 76.273 1.00 18.30
ATOM 3961 C LEU A 499 33.222 49.848 76.647 1.00 18.08
ATOM 3962 O LEU A 499 32.711 50.004 77.782 1.00 14.69
ATOM 3963 CB LEU A 499 34.719 51.296 75.293 1.00 19.02
ATOM 3964 CG LEU A 499 35.650 52.421 75.677 1.00 28.28
ATOM 3965 CD1 LEU A 499 36.768 51.856 76.527 1.00 27.69
ATOM 3966 CD2 LEU A 499 36.210 53.135 74.448 1.00 31.77
ATOM 3967 N ASN A 500 32.491 49.430 75.610 1.00 11.59
ATOM 3968 CA ASN A 500 31.084 49.123 75.748 1.00 10.98
ATOM 3969 C ASN A 500 30.844 48.021 76.775 1.00 11.55
ATOM 3970 O ASN A 500 29.989 48.125 77.656 1.00 13.43
ATOM 3971 CB ASN A 500 30.530 48.735 74.355 1.00 11.90
ATOM 3972 CG ASN A 500 29.020 48.504 74.328 1.00 26.05
ATOM 3973 OD1 ASN A 500 28.208 49.304 74.815 1.00 19.55
ATOM 3974 ND2 ASN A 500 28.607 47.387 73.759 1.00 21.02
ATOM 3975 N GLU A 501 31.601 46.927 76.633 1.00 11.18
ATOM 3976 CA GLU A 501 31.471 45.787 77.537 1.00 11.00
ATOM 3977 C GLU A 501 31.859 46.184 78.954 1.00 14.40
ATOM 3978 O GLU A 501 31.266 45.757 79.930 1.00 13.70
ATOM 3979 CB GLU A 501 32.286 44.574 77.022 1.00 13.23
ATOM 3980 CG GLU A 501 32.328 43.425 78.064 1.00 12.24
ATOM 3981 CD GLU A 501 30.930 42.880 78.253 1.00 20.51
ATOM 3982 OE1 GLU A 501 30.040 43.113 77.452 1.00 18.75
ATOM 3983 OE2 GLU A 501 30.747 42.158 79.338 1.00 16.17
ATOM 3984 N PHE A 502 32.876 47.051 79.080 1.00 10.99
ATOM 3985 CA PHE A 502 33.281 47.530 80.382 1.00 12.47
ATOM 3986 C PHE A 502 32.095 48.241 81.068 1.00 12.80
ATOM 3987 O PHE A 502 31.733 48.062 82.230 1.00 11.74
ATOM 3988 CB PHE A 502 34.498 48.490 80.167 1.00 14.11
ATOM 3989 CG PHE A 502 34.641 49.500 81.265 1.00 11.76
ATOM 3990 CD1 PHE A 502 34.958 49.120 82.570 1.00 9.77
ATOM 3991 CD2 PHE A 502 34.363 50.847 81.040 1.00 17.45
ATOM 3992 CE1 PHE A 502 35.059 50.053 83.605 1.00 12.88
ATOM 3993 CE2 PHE A 502 34.443 51.799 82.063 1.00 20.32
ATOM 3994 CZ PHE A 502 34.812 51.406 83.350 1.00 16.55
ATOM 3995 N LEU A 503 31.470 49.100 80.286 1.00 10.48
ATOM 3996 CA LEU A 503 30.342 49.835 80.759 1.00 11.84
ATOM 3997 C LEU A 503 29.184 48.917 81.089 1.00 11.65
ATOM 3998 O LEU A 503 28.531 49.077 82.110 1.00 14.41
ATOM 3999 CB LEU A 503 29.974 50.854 79.668 1.00 12.15
ATOM 4000 CG LEU A 503 30.872 52.105 79.668 1.00 12.97
ATOM 4001 CD1 LEU A 503 30.572 52.957 78.438 1.00 9.62
ATOM 4002 CD2 LEU A 503 30.614 52.935 80.936 1.00 14.08
ATOM 4003 N ALA A 504 28.947 47.910 80.248 1.00 12.65
ATOM 4004 CA ALA A 504 27.850 46.977 80.499 1.00 8.77
ATOM 4005 C ALA A 504 28.038 46.282 81.812 1.00 12.09
ATOM 4006 O ALA A 504 27.118 46.081 82.598 1.00 10.26
ATOM 4007 CB ALA A 504 27.742 45.965 79.370 1.00 7.47
ATOM 4008 N GLN A 505 29.280 45.900 82.035 1.00 12.47
ATOM 4009 CA GLN A 505 29.609 45.209 83.271 1.00 12.94
ATOM 4010 C GLN A 505 29.424 46.144 84.484 1.00 14.71
ATOM 4011 O GLN A 505 28.902 45.773 85.566 1.00 13.04
ATOM 4012 CB GLN A 505 31.068 44.689 83.183 1.00 14.37
ATOM 4013 CG GLN A 505 31.243 43.520 82.174 1.00 17.48
ATOM 4014 CD GLN A 505 32.693 43.054 82.089 1.00 20.84
ATOM 4015 OE1 GLN A 505 33.556 43.462 82.890 1.00 21.65
ATOM 4016 NE2 GLN A 505 32.990 42.221 81.096 1.00 16.13

ATOM 4017 N THR A 506 29.862 47.389 84.298 1.00 13.56
ATOM 4018 CA THR A 506 29.749 48.348 85.373 1.00 15.13
ATOM 4019 C THR A 506 28.280 48.610 85.714 1.00 17.30
ATOM 4020 O THR A 506 27.835 48.662 86.879 1.00 13.71
ATOM 4021 CB THR A 506 30.561 49.613 85.043 1.00 13.74
ATOM 4022 OG1 THR A 506 31.903 49.243 84.853 1.00 13.66
ATOM 4023 CG2 THR A 506 30.542 50.538 86.242 1.00 16.98
ATOM 4024 N LEU A 507 27.532 48.734 84.636 1.00 15.17
ATOM 4025 CA LEU A 507 26.109 49.007 84.748 1.00 15.46
ATOM 4026 C LEU A 507 25.391 47.944 85.517 1.00 15.53
ATOM 4027 O LEU A 507 24.464 48.230 86.256 1.00 14.10
ATOM 4028 CB LEU A 507 25.476 49.185 83.351 1.00 16.26
ATOM 4029 CG LEU A 507 24.017 49.581 83.374 1.00 17.96
ATOM 4030 CD1 LEU A 507 23.801 50.929 84.087 1.00 12.71
ATOM 4031 CD2 LEU A 507 23.550 49.633 81.923 1.00 13.10
ATOM 4032 N GLN A 508 25.802 46.696 85.343 1.00 14.24
ATOM 4033 CA GLN A 508 25.145 45.630 86.077 1.00 11.70
ATOM 4034 C GLN A 508 25.264 45.846 87.581 1.00 19.07
ATOM 4035 O GLN A 508 24.521 45.269 88.354 1.00 16.98
ATOM 4036 CB GLN A 508 25.736 44.246 85.745 1.00 11.79
ATOM 4037 CG GLN A 508 25.402 43.722 84.334 1.00 17.73
ATOM 4038 CD GLN A 508 25.860 42.282 84.204 1.00 20.08
ATOM 4039 OE1 GLN A 508 26.960 41.972 84.695 1.00 23.98
ATOM 4040 NE2 GLN A 508 25.048 41.402 83.594 1.00 15.23
ATOM 4041 N ARG A 509 26.217 46.639 88.053 1.00 17.16
ATOM 4042 CA ARG A 509 26.332 46.847 89.498 1.00 12.26
ATOM 4043 C ARG A 509 25.960 48.279 89.899 1.00 17.09
ATOM 4044 O ARG A 509 26.379 48.778 90.948 1.00 18.12
ATOM 4045 CB ARG A 509 27.741 46.537 90.036 1.00 12.59
ATOM 4046 CG ARG A 509 28.095 45.097 89.784 1.00 17.56
ATOM 4047 CD ARG A 509 27.422 44.228 90.829 1.00 25.37
ATOM 4048 NE ARG A 509 28.134 44.270 92.117 1.00 81.24
ATOM 4049 CZ ARG A 509 29.377 43.822 92.417 1.00 88.85
ATOM 4050 NH1 ARG A 509 30.235 43.233 91.555 1.00 63.02
ATOM 4051 NH2 ARG A 509 29.779 43.978 93.676 1.00 42.33
ATOM 4052 N ALA A 510 25.162 48.958 89.088 1.00 14.89
ATOM 4053 CA ALA A 510 24.782 50.321 89.428 1.00 13.02
ATOM 4054 C ALA A 510 23.824 50.270 90.594 1.00 22.66
ATOM 4055 O ALA A 510 23.176 49.243 90.747 1.00 21.57
ATOM 4056 CB ALA A 510 24.166 51.066 88.248 1.00 13.60
ATOM 4057 N PRO A 511 23.755 51.340 91.417 1.00 20.55
ATOM 4058 CA PRO A 511 24.521 52.568 91.190 1.00 16.50
ATOM 4059 C PRO A 511 25.912 52.528 91.759 1.00 17.68
ATOM 4060 O PRO A 511 26.199 51.765 92.658 1.00 15.20
ATOM 4061 CB PRO A 511 23.836 53.667 92.001 1.00 15.68
ATOM 4062 CG PRO A 511 23.118 52.916 93.106 1.00 22.23
ATOM 4063 CD PRO A 511 22.859 51.497 92.597 1.00 18.77
ATOM 4064 N LEU A 512 26.755 53.380 91.203 1.00 19.26
ATOM 4065 CA LEU A 512 28.070 53.588 91.751 1.00 19.26
ATOM 4066 C LEU A 512 27.964 54.919 92.529 1.00 19.35
ATOM 4067 O LEU A 512 27.053 55.732 92.316 1.00 15.40
ATOM 4068 CB LEU A 512 29.183 53.659 90.683 1.00 19.06
ATOM 4069 CG LEU A 512 29.796 52.274 90.415 1.00 23.85
ATOM 4070 CD1 LEU A 512 28.762 51.351 89.763 1.00 24.14
ATOM 4071 CD2 LEU A 512 30.975 52.408 89.453 1.00 17.31
ATOM 4072 N PRO A 513 28.880 55.157 93.459 1.00 18.91
ATOM 4073 CA PRO A 513 28.823 56.408 94.168 1.00 16.34
ATOM 4074 C PRO A 513 28.925 57.520 93.140 1.00 17.64
ATOM 4075 O PRO A 513 29.686 57.443 92.192 1.00 15.39
ATOM 4076 CB PRO A 513 30.031 56.431 95.107 1.00 16.06
ATOM 4077 CG PRO A 513 30.443 54.972 95.246 1.00 21.97

ATOM	4078	CD	PRO	A	513	29.960	54.270	93.987	1.00	17.15
ATOM	4079	N	LEU	A	514	28.154	58.573	93.341	1.00	19.37
ATOM	4080	CA	LEU	A	514	28.155	59.712	92.431	1.00	20.71
ATOM	4081	C	LEU	A	514	29.567	60.240	92.151	1.00	22.73
ATOM	4082	O	LEU	A	514	29.934	60.486	90.991	1.00	20.91
ATOM	4083	CB	LEU	A	514	27.209	60.816	92.955	1.00	19.46
ATOM	4084	CG	LEU	A	514	27.173	62.058	92.077	1.00	23.47
ATOM	4085	CD1	LEU	A	514	26.650	61.694	90.681	1.00	21.60
ATOM	4086	CD2	LEU	A	514	26.275	63.087	92.767	1.00	19.09
ATOM	4087	N	GLY	A	515	30.353	60.384	93.236	1.00	19.02
ATOM	4088	CA	GLY	A	515	31.711	60.866	93.104	1.00	16.33
ATOM	4089	C	GLY	A	515	32.489	60.000	92.121	1.00	20.68
ATOM	4090	O	GLY	A	515	33.336	60.489	91.363	1.00	17.47
ATOM	4091	N	HIS	A	516	32.199	58.691	92.105	1.00	16.69
ATOM	4092	CA	HIS	A	516	32.961	57.829	91.206	1.00	16.67
ATOM	4093	C	HIS	A	516	32.629	58.092	89.762	1.00	16.39
ATOM	4094	O	HIS	A	516	33.485	58.094	88.886	1.00	13.40
ATOM	4095	CB	HIS	A	516	32.781	56.335	91.479	1.00	16.85
ATOM	4096	CG	HIS	A	516	33.328	55.909	92.786	1.00	23.07
ATOM	4097	ND1	HIS	A	516	33.586	56.811	93.804	1.00	27.10
ATOM	4098	CD2	HIS	A	516	33.691	54.664	93.219	1.00	26.55
ATOM	4099	CE1	HIS	A	516	34.067	56.096	94.831	1.00	27.40
ATOM	4100	NE2	HIS	A	516	34.144	54.803	94.514	1.00	26.59
ATOM	4101	N	ILE	A	517	31.349	58.288	89.534	1.00	14.76
ATOM	4102	CA	ILE	A	517	30.887	58.520	88.189	1.00	15.71
ATOM	4103	C	ILE	A	517	31.444	59.817	87.666	1.00	13.62
ATOM	4104	O	ILE	A	517	31.851	59.960	86.511	1.00	13.02
ATOM	4105	CB	ILE	A	517	29.350	58.408	88.144	1.00	20.46
ATOM	4106	CG1	ILE	A	517	28.925	56.989	88.555	1.00	23.97
ATOM	4107	CG2	ILE	A	517	28.793	58.653	86.750	1.00	19.51
ATOM	4108	CD1	ILE	A	517	29.636	55.831	87.826	1.00	21.92
ATOM	4109	N	LYS	A	518	31.433	60.804	88.549	1.00	13.76
ATOM	4110	CA	LYS	A	518	32.004	62.082	88.137	1.00	12.83
ATOM	4111	C	LYS	A	518	33.487	61.877	87.759	1.00	17.13
ATOM	4112	O	LYS	A	518	33.971	62.371	86.745	1.00	14.95
ATOM	4113	CB	LYS	A	518	31.858	63.092	89.279	1.00	12.59
ATOM	4114	CG	LYS	A	518	30.392	63.447	89.416	1.00	15.77
ATOM	4115	CD	LYS	A	518	30.169	64.528	90.446	1.00	25.59
ATOM	4116	CE	LYS	A	518	28.743	65.047	90.425	1.00	26.22
ATOM	4117	NZ	LYS	A	518	28.669	66.440	90.886	1.00	26.75
ATOM	4118	N	ARG	A	519	34.237	61.144	88.604	1.00	15.99
ATOM	4119	CA	ARG	A	519	35.647	60.914	88.321	1.00	13.25
ATOM	4120	C	ARG	A	519	35.803	60.213	86.998	1.00	16.26
ATOM	4121	O	ARG	A	519	36.679	60.478	86.216	1.00	13.50
ATOM	4122	CB	ARG	A	519	36.265	60.075	89.423	1.00	14.16
ATOM	4123	CG	ARG	A	519	37.741	59.741	89.216	1.00	13.79
ATOM	4124	CD	ARG	A	519	38.685	60.955	89.134	1.00	22.42
ATOM	4125	NE	ARG	A	519	40.127	60.613	89.069	1.00	17.77
ATOM	4126	CZ	ARG	A	519	41.035	61.432	88.570	1.00	19.26
ATOM	4127	NH1	ARG	A	519	40.692	62.640	88.087	1.00	18.57
ATOM	4128	NH2	ARG	A	519	42.289	61.014	88.549	1.00	17.51
ATOM	4129	N	MET	A	520	34.897	59.292	86.743	1.00	13.85
ATOM	4130	CA	MET	A	520	34.944	58.548	85.514	1.00	13.32
ATOM	4131	C	MET	A	520	34.803	59.460	84.299	1.00	16.61
ATOM	4132	O	MET	A	520	35.461	59.286	83.279	1.00	15.39
ATOM	4133	CB	MET	A	520	33.860	57.425	85.585	1.00	15.92
ATOM	4134	CG	MET	A	520	33.887	56.502	84.369	1.00	16.73
ATOM	4135	SD	MET	A	520	32.699	55.131	84.463	1.00	19.40
ATOM	4136	CE	MET	A	520	33.250	54.267	85.942	1.00	17.31
ATOM	4137	N	GLN	A	521	33.919	60.449	84.358	1.00	10.96
ATOM	4138	CA	GLN	A	521	33.800	61.336	83.205	1.00	10.25

ATOM 4139 C GLN A 521 35.105 62.160 83.122 1.00 14.21
ATOM 4140 O GLN A 521 35.684 62.487 82.073 1.00 11.43
ATOM 4141 CB GLN A 521 32.548 62.237 83.376 1.00 9.22
ATOM 4142 CG GLN A 521 32.547 63.519 82.503 1.00 12.68
ATOM 4143 CD GLN A 521 32.758 63.301 81.025 1.00 18.23
ATOM 4144 OE1 GLN A 521 33.271 64.187 80.309 1.00 20.20
ATOM 4145 NE2 GLN A 521 32.453 62.102 80.554 1.00 10.43
ATOM 4146 N GLU A 522 35.608 62.524 84.295 1.00 15.29
ATOM 4147 CA GLU A 522 36.816 63.335 84.345 1.00 14.86
ATOM 4148 C GLU A 522 38.026 62.632 83.702 1.00 24.87
ATOM 4149 O GLU A 522 38.848 63.232 82.990 1.00 19.95
ATOM 4150 CB GLU A 522 37.068 63.573 85.820 1.00 15.93
ATOM 4151 CG GLU A 522 38.175 64.573 86.121 1.00 34.79
ATOM 4152 CD GLU A 522 38.013 64.959 87.556 1.00 61.54
ATOM 4153 OE1 GLU A 522 38.436 64.271 88.466 1.00 24.02
ATOM 4154 OE2 GLU A 522 37.252 66.014 87.710 1.00 60.58
ATOM 4155 N VAL A 523 38.179 61.338 83.966 1.00 17.81
ATOM 4156 CA VAL A 523 39.302 60.635 83.392 1.00 17.49
ATOM 4157 C VAL A 523 39.081 60.051 81.994 1.00 17.20
ATOM 4158 O VAL A 523 40.038 59.940 81.230 1.00 22.12
ATOM 4159 CB VAL A 523 39.952 59.621 84.340 1.00 18.80
ATOM 4160 CG1 VAL A 523 40.427 60.324 85.613 1.00 18.67
ATOM 4161 CG2 VAL A 523 38.957 58.522 84.717 1.00 17.30
ATOM 4162 N TYR A 524 37.851 59.676 81.633 1.00 13.33
ATOM 4163 CA TYR A 524 37.638 59.045 80.331 1.00 12.09
ATOM 4164 C TYR A 524 36.842 59.839 79.321 1.00 19.77
ATOM 4165 O TYR A 524 36.720 59.417 78.179 1.00 17.94
ATOM 4166 CB TYR A 524 36.961 57.656 80.463 1.00 13.83
ATOM 4167 CG TYR A 524 37.615 56.667 81.421 1.00 14.86
ATOM 4168 CD1 TYR A 524 38.999 56.608 81.574 1.00 13.07
ATOM 4169 CD2 TYR A 524 36.832 55.761 82.146 1.00 19.57
ATOM 4170 CE1 TYR A 524 39.592 55.704 82.460 1.00 18.13
ATOM 4171 CE2 TYR A 524 37.403 54.832 83.019 1.00 18.46
ATOM 4172 CZ TYR A 524 38.790 54.813 83.181 1.00 17.58
ATOM 4173 OH TYR A 524 39.360 53.937 84.087 1.00 16.81
ATOM 4174 N ASN A 525 36.235 60.940 79.753 1.00 20.91
ATOM 4175 CA ASN A 525 35.435 61.755 78.865 1.00 16.88
ATOM 4176 C ASN A 525 34.488 60.923 78.018 1.00 18.05
ATOM 4177 O ASN A 525 34.450 61.014 76.789 1.00 15.92
ATOM 4178 CB ASN A 525 36.361 62.615 78.002 1.00 13.81
ATOM 4179 CG ASN A 525 35.680 63.751 77.259 1.00 18.94
ATOM 4180 OD1 ASN A 525 36.243 64.268 76.280 1.00 18.98
ATOM 4181 ND2 ASN A 525 34.502 64.169 77.693 1.00 14.31
ATOM 4182 N PHE A 526 33.659 60.120 78.683 1.00 14.70
ATOM 4183 CA PHE A 526 32.676 59.337 77.947 1.00 12.71
ATOM 4184 C PHE A 526 31.596 60.234 77.380 1.00 16.60
ATOM 4185 O PHE A 526 30.891 59.866 76.439 1.00 15.88
ATOM 4186 CB PHE A 526 32.038 58.303 78.876 1.00 14.35
ATOM 4187 CG PHE A 526 32.957 57.130 79.130 1.00 15.85
ATOM 4188 CD1 PHE A 526 33.895 56.735 78.175 1.00 19.68
ATOM 4189 CD2 PHE A 526 32.876 56.397 80.314 1.00 16.85
ATOM 4190 CE1 PHE A 526 34.687 55.604 78.378 1.00 21.64
ATOM 4191 CE2 PHE A 526 33.698 55.298 80.567 1.00 19.90
ATOM 4192 CZ PHE A 526 34.590 54.890 79.575 1.00 18.31
ATOM 4193 N ASN A 527 31.418 61.433 77.949 1.00 12.75
ATOM 4194 CA ASN A 527 30.391 62.355 77.446 1.00 12.28
ATOM 4195 C ASN A 527 30.627 62.668 75.971 1.00 19.85
ATOM 4196 O ASN A 527 29.715 62.907 75.185 1.00 18.13
ATOM 4197 CB ASN A 527 30.431 63.713 78.160 1.00 13.86
ATOM 4198 CG ASN A 527 29.641 63.696 79.434 1.00 25.14
ATOM 4199 OD1 ASN A 527 29.760 64.600 80.250 1.00 20.32

ATOM	4200	ND2	ASN	A	527	28.830	62.668	79.610	1.00	10.82
ATOM	4201	N	ALA	A	528	31.906	62.668	75.607	1.00	15.34
ATOM	4202	CA	ALA	A	528	32.280	62.964	74.264	1.00	17.72
ATOM	4203	C	ALA	A	528	32.075	61.861	73.228	1.00	26.48
ATOM	4204	O	ALA	A	528	32.198	62.127	72.031	1.00	21.26
ATOM	4205	CB	ALA	A	528	33.729	63.372	74.236	1.00	18.38
ATOM	4206	N	ILE	A	529	31.810	60.629	73.664	1.00	19.00
ATOM	4207	CA	ILE	A	529	31.690	59.524	72.731	1.00	15.58
ATOM	4208	C	ILE	A	529	30.389	59.499	71.945	1.00	15.90
ATOM	4209	O	ILE	A	529	29.305	59.561	72.494	1.00	16.45
ATOM	4210	CB	ILE	A	529	31.946	58.208	73.454	1.00	17.38
ATOM	4211	CG1	ILE	A	529	33.456	58.159	73.709	1.00	19.42
ATOM	4212	CG2	ILE	A	529	31.511	57.103	72.488	1.00	17.67
ATOM	4213	CD1	ILE	A	529	34.027	57.047	74.576	1.00	23.37
ATOM	4214	N	ASN	A	530	30.440	59.418	70.641	1.00	16.94
ATOM	4215	CA	ASN	A	530	29.151	59.417	69.969	1.00	20.74
ATOM	4216	C	ASN	A	530	28.522	58.081	69.611	1.00	25.19
ATOM	4217	O	ASN	A	530	27.369	58.026	69.217	1.00	23.63
ATOM	4218	CB	ASN	A	530	28.937	60.566	68.986	1.00	39.14
ATOM	4219	CG	ASN	A	530	28.612	61.852	69.749	1.00	80.92
ATOM	4220	OD1	ASN	A	530	27.639	61.959	70.533	1.00	86.83
ATOM	4221	ND2	ASN	A	530	29.470	62.838	69.537	1.00	45.14
ATOM	4222	N	ASN	A	531	29.306	57.019	69.759	1.00	19.99
ATOM	4223	CA	ASN	A	531	28.875	55.667	69.494	1.00	18.88
ATOM	4224	C	ASN	A	531	27.637	55.452	70.350	1.00	15.67
ATOM	4225	O	ASN	A	531	27.671	55.661	71.566	1.00	15.13
ATOM	4226	CB	ASN	A	531	30.045	54.762	69.928	1.00	11.62
ATOM	4227	CG	ASN	A	531	29.705	53.292	69.866	1.00	26.73
ATOM	4228	OD1	ASN	A	531	28.724	52.832	70.471	1.00	21.97
ATOM	4229	ND2	ASN	A	531	30.510	52.554	69.105	1.00	18.28
ATOM	4230	N	SER	A	532	26.551	55.074	69.715	1.00	12.93
ATOM	4231	CA	SER	A	532	25.293	54.931	70.456	1.00	15.99
ATOM	4232	C	SER	A	532	25.248	53.889	71.565	1.00	17.50
ATOM	4233	O	SER	A	532	24.631	54.066	72.611	1.00	20.47
ATOM	4234	CB	SER	A	532	24.088	54.846	69.518	1.00	17.43
ATOM	4235	OG	SER	A	532	24.274	53.791	68.570	1.00	24.83
ATOM	4236	N	GLU	A	533	25.876	52.753	71.337	1.00	14.65
ATOM	4237	CA	GLU	A	533	25.835	51.708	72.339	1.00	13.13
ATOM	4238	C	GLU	A	533	26.497	52.181	73.614	1.00	19.42
ATOM	4239	O	GLU	A	533	25.964	52.028	74.725	1.00	15.25
ATOM	4240	CB	GLU	A	533	26.547	50.464	71.780	1.00	13.22
ATOM	4241	CG	GLU	A	533	25.712	49.829	70.637	1.00	9.87
ATOM	4242	CD	GLU	A	533	24.531	49.055	71.162	1.00	21.99
ATOM	4243	OE1	GLU	A	533	24.395	48.722	72.319	1.00	18.49
ATOM	4244	OE2	GLU	A	533	23.625	48.805	70.267	1.00	16.24
ATOM	4245	N	ILE	A	534	27.686	52.747	73.415	1.00	15.22
ATOM	4246	CA	ILE	A	534	28.495	53.265	74.512	1.00	14.94
ATOM	4247	C	ILE	A	534	27.793	54.420	75.228	1.00	14.04
ATOM	4248	O	ILE	A	534	27.677	54.447	76.461	1.00	17.42
ATOM	4249	CB	ILE	A	534	29.926	53.655	74.077	1.00	17.98
ATOM	4250	CG1	ILE	A	534	30.733	52.461	73.557	1.00	13.41
ATOM	4251	CG2	ILE	A	534	30.680	54.387	75.216	1.00	15.34
ATOM	4252	CD1	ILE	A	534	32.003	52.906	72.825	1.00	17.39
ATOM	4253	N	ARG	A	535	27.310	55.402	74.475	1.00	14.39
ATOM	4254	CA	ARG	A	535	26.611	56.511	75.135	1.00	17.35
ATOM	4255	C	ARG	A	535	25.347	56.016	75.868	1.00	14.54
ATOM	4256	O	ARG	A	535	24.998	56.382	76.973	1.00	15.05
ATOM	4257	CB	ARG	A	535	26.232	57.576	74.108	1.00	16.26
ATOM	4258	CG	ARG	A	535	25.583	58.826	74.730	1.00	8.73
ATOM	4259	CD	ARG	A	535	25.392	59.919	73.666	1.00	11.55
ATOM	4260	NE	ARG	A	535	25.126	61.228	74.251	1.00	15.18

ATOM	4261	CZ	ARG	A	535	26.049	62.043	74.761	1.00	26.20
ATOM	4262	NH1	ARG	A	535	27.354	61.765	74.769	1.00	20.26
ATOM	4263	NH2	ARG	A	535	25.636	63.189	75.286	1.00	19.91
ATOM	4264	N	PHE	A	536	24.632	55.126	75.233	1.00	11.71
ATOM	4265	CA	PHE	A	536	23.462	54.627	75.876	1.00	9.63
ATOM	4266	C	PHE	A	536	23.825	54.092	77.233	1.00	13.77
ATOM	4267	O	PHE	A	536	23.256	54.497	78.231	1.00	13.81
ATOM	4268	CB	PHE	A	536	22.906	53.471	75.016	1.00	10.66
ATOM	4269	CG	PHE	A	536	21.865	52.621	75.710	1.00	14.64
ATOM	4270	CD1	PHE	A	536	20.699	53.158	76.256	1.00	13.81
ATOM	4271	CD2	PHE	A	536	22.052	51.242	75.840	1.00	19.23
ATOM	4272	CE1	PHE	A	536	19.762	52.325	76.877	1.00	14.23
ATOM	4273	CE2	PHE	A	536	21.127	50.395	76.457	1.00	16.53
ATOM	4274	CZ	PHE	A	536	19.960	50.945	76.984	1.00	11.63
ATOM	4275	N	ARG	A	537	24.750	53.131	77.282	1.00	12.89
ATOM	4276	CA	ARG	A	537	25.110	52.536	78.577	1.00	11.92
ATOM	4277	C	ARG	A	537	25.734	53.520	79.575	1.00	16.03
ATOM	4278	O	ARG	A	537	25.525	53.436	80.793	1.00	10.71
ATOM	4279	CB	ARG	A	537	25.949	51.253	78.505	1.00	11.85
ATOM	4280	CG	ARG	A	537	25.274	50.113	77.776	1.00	8.59
ATOM	4281	CD	ARG	A	537	26.142	48.857	77.547	1.00	17.16
ATOM	4282	NE	ARG	A	537	25.233	47.845	76.992	1.00	16.12
ATOM	4283	CZ	ARG	A	537	24.869	47.824	75.716	1.00	25.23
ATOM	4284	NH1	ARG	A	537	25.414	48.641	74.802	1.00	13.55
ATOM	4285	NH2	ARG	A	537	23.946	46.947	75.356	1.00	16.52
ATOM	4286	N	TRP	A	538	26.544	54.451	79.060	1.00	13.16
ATOM	4287	CA	TRP	A	538	27.170	55.440	79.907	1.00	10.77
ATOM	4288	C	TRP	A	538	26.079	56.286	80.532	1.00	13.43
ATOM	4289	O	TRP	A	538	26.048	56.509	81.736	1.00	13.45
ATOM	4290	CB	TRP	A	538	28.036	56.318	78.996	1.00	12.97
ATOM	4291	CG	TRP	A	538	28.489	57.611	79.604	1.00	12.46
ATOM	4292	CD1	TRP	A	538	28.330	58.807	79.019	1.00	13.56
ATOM	4293	CD2	TRP	A	538	29.199	57.826	80.857	1.00	11.95
ATOM	4294	NE1	TRP	A	538	28.932	59.757	79.801	1.00	12.84
ATOM	4295	CE2	TRP	A	538	29.455	59.208	80.938	1.00	12.68
ATOM	4296	CE3	TRP	A	538	29.667	57.000	81.914	1.00	11.87
ATOM	4297	CZ2	TRP	A	538	30.115	59.780	82.024	1.00	10.55
ATOM	4298	CZ3	TRP	A	538	30.334	57.557	82.994	1.00	12.97
ATOM	4299	CH2	TRP	A	538	30.537	58.953	83.046	1.00	14.62
ATOM	4300	N	LEU	A	539	25.160	56.761	79.714	1.00	8.88
ATOM	4301	CA	LEU	A	539	24.132	57.592	80.310	1.00	11.52
ATOM	4302	C	LEU	A	539	23.249	56.878	81.335	1.00	17.64
ATOM	4303	O	LEU	A	539	22.775	57.470	82.308	1.00	15.29
ATOM	4304	CB	LEU	A	539	23.253	58.271	79.251	1.00	13.68
ATOM	4305	CG	LEU	A	539	23.977	59.247	78.323	1.00	15.24
ATOM	4306	CD1	LEU	A	539	22.989	59.923	77.388	1.00	13.27
ATOM	4307	CD2	LEU	A	539	24.693	60.312	79.121	1.00	13.80
ATOM	4308	N	ARG	A	540	22.988	55.583	81.115	1.00	14.05
ATOM	4309	CA	ARG	A	540	22.176	54.850	82.067	1.00	11.62
ATOM	4310	C	ARG	A	540	22.880	54.792	83.418	1.00	13.27
ATOM	4311	O	ARG	A	540	22.277	54.942	84.488	1.00	12.86
ATOM	4312	CB	ARG	A	540	21.883	53.426	81.584	1.00	12.88
ATOM	4313	CG	ARG	A	540	20.894	53.325	80.408	1.00	8.76
ATOM	4314	CD	ARG	A	540	20.453	51.857	80.281	1.00	14.08
ATOM	4315	NE	ARG	A	540	19.442	51.552	81.288	1.00	11.93
ATOM	4316	CZ	ARG	A	540	18.856	50.391	81.486	1.00	16.72
ATOM	4317	NH1	ARG	A	540	19.145	49.317	80.774	1.00	16.31
ATOM	4318	NH2	ARG	A	540	17.926	50.330	82.416	1.00	9.86
ATOM	4319	N	LEU	A	541	24.189	54.546	83.338	1.00	10.69
ATOM	4320	CA	LEU	A	541	25.036	54.432	84.526	1.00	9.89
ATOM	4321	C	LEU	A	541	25.017	55.712	85.353	1.00	12.38

SUBSTITUTE SHEET (RULE 26)

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ATOM   4322  O   LEU A 541      24.961  55.749  86.598  1.00 12.85
ATOM   4323  CB  LEU A 541      26.482  54.119  84.074  1.00  8.98
ATOM   4324  CG  LEU A 541      27.519  53.986  85.194  1.00 13.06
ATOM   4325  CD1 LEU A 541      27.144  52.889  86.196  1.00 11.30
ATOM   4326  CD2 LEU A 541      28.904  53.697  84.606  1.00 11.15
ATOM   4327  N   CYS A 542      25.097  56.800  84.603  1.00 14.91
ATOM   4328  CA  CYS A 542      25.043  58.147  85.153  1.00 15.42
ATOM   4329  C   CYS A 542      23.719  58.436  85.881  1.00 12.87
ATOM   4330  O   CYS A 542      23.689  58.913  87.019  1.00 13.42
ATOM   4331  CB  CYS A 542      25.234  59.166  83.987  1.00 14.29
ATOM   4332  SG  CYS A 542      26.987  59.258  83.516  1.00 15.48
ATOM   4333  N   ILE A 543      22.620  58.161  85.188  1.00 11.12
ATOM   4334  CA  ILE A 543      21.287  58.388  85.723  1.00 12.92
ATOM   4335  C   ILE A 543      21.034  57.514  86.912  1.00 15.64
ATOM   4336  O   ILE A 543      20.565  57.959  87.965  1.00 14.40
ATOM   4337  CB  ILE A 543      20.193  58.168  84.670  1.00 14.69
ATOM   4338  CG1 ILE A 543      20.350  59.208  83.580  1.00 14.31
ATOM   4339  CG2 ILE A 543      18.785  58.292  85.281  1.00 11.05
ATOM   4340  CD1 ILE A 543      20.139  60.651  84.095  1.00 13.56
ATOM   4341  N   GLN A 544      21.362  56.237  86.729  1.00 13.09
ATOM   4342  CA  GLN A 544      21.144  55.310  87.829  1.00 12.90
ATOM   4343  C   GLN A 544      22.017  55.629  89.015  1.00 16.30
ATOM   4344  O   GLN A 544      21.649  55.299  90.140  1.00 12.81
ATOM   4345  CB  GLN A 544      21.287  53.846  87.396  1.00 14.77
ATOM   4346  CG  GLN A 544      20.159  53.374  86.449  1.00 13.43
ATOM   4347  CD  GLN A 544      20.399  51.967  85.889  1.00 16.60
ATOM   4348  OE1 GLN A 544      20.048  51.639  84.754  1.00 18.63
ATOM   4349  NE2 GLN A 544      20.976  51.100  86.695  1.00  7.00
ATOM   4350  N   SER A 545      23.143  56.296  88.748  1.00 13.80
ATOM   4351  CA  SER A 545      24.058  56.712  89.799  1.00 13.01
ATOM   4352  C   SER A 545      23.715  58.091  90.368  1.00 17.51
ATOM   4353  O   SER A 545      24.429  58.656  91.189  1.00 17.76
ATOM   4354  CB  SER A 545      25.495  56.649  89.330  1.00 14.26
ATOM   4355  OG  SER A 545      25.735  55.273  89.138  1.00 15.74
ATOM   4356  N   LYS A 546      22.586  58.609  89.924  1.00 13.25
ATOM   4357  CA  LYS A 546      22.029  59.857  90.370  1.00 14.37
ATOM   4358  C   LYS A 546      22.771  61.109  89.963  1.00 16.71
ATOM   4359  O   LYS A 546      22.770  62.106  90.698  1.00 16.30
ATOM   4360  CB  LYS A 546      21.850  59.890  91.878  1.00 15.93
ATOM   4361  CG  LYS A 546      21.320  58.602  92.470  1.00 16.80
ATOM   4362  CD  LYS A 546      19.919  58.370  91.982  1.00 13.30
ATOM   4363  CE  LYS A 546      19.280  57.148  92.617  1.00 24.82
ATOM   4364  NZ  LYS A 546      18.052  56.742  91.905  1.00 17.92
ATOM   4365  N   TRP A 547      23.418  61.104  88.827  1.00 15.72
ATOM   4366  CA  TRP A 547      24.103  62.319  88.438  1.00 16.24
ATOM   4367  C   TRP A 547      23.132  63.246  87.727  1.00 18.78
ATOM   4368  O   TRP A 547      22.760  63.007  86.605  1.00 16.35
ATOM   4369  CB  TRP A 547      25.261  61.999  87.505  1.00 15.42
ATOM   4370  CG  TRP A 547      26.211  63.156  87.344  1.00 16.84
ATOM   4371  CD1 TRP A 547      26.177  64.386  87.949  1.00 18.62
ATOM   4372  CD2 TRP A 547      27.349  63.140  86.479  1.00 15.94
ATOM   4373  NE1 TRP A 547      27.267  65.115  87.543  1.00 16.22
ATOM   4374  CE2 TRP A 547      27.997  64.380  86.629  1.00 18.06
ATOM   4375  CE3 TRP A 547      27.900  62.159  85.647  1.00 16.57
ATOM   4376  CZ2 TRP A 547      29.186  64.662  85.928  1.00 16.68
ATOM   4377  CZ3 TRP A 547      29.068  62.459  84.966  1.00 19.03
ATOM   4378  CH2 TRP A 547      29.693  63.709  85.079  1.00 18.04
ATOM   4379  N   GLU A 548      22.706  64.327  88.376  1.00 13.95
ATOM   4380  CA  GLU A 548      21.745  65.238  87.780  1.00 13.21
ATOM   4381  C   GLU A 548      22.176  65.856  86.468  1.00 17.27
ATOM   4382  O   GLU A 548      21.352  66.149  85.617  1.00 18.18
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ATOM   4383  CB  GLU A 548      21.375  66.370  88.771  1.00 15.29
ATOM   4384  CG  GLU A 548      20.751  65.878  90.109  1.00 19.42
ATOM   4385  CD  GLU A 548      20.207  67.018  90.953  1.00 33.00
ATOM   4386  OE1 GLU A 548      19.775  68.057  90.492  1.00 46.88
ATOM   4387  OE2 GLU A 548      20.224  66.791  92.239  1.00 30.89
ATOM   4388  N   ASP A 549      23.477  66.105  86.285  1.00 17.99
ATOM   4389  CA  ASP A 549      23.929  66.735  85.054  1.00 10.58
ATOM   4390  C   ASP A 549      23.666  65.896  83.853  1.00 12.02
ATOM   4391  O   ASP A 549      23.629  66.354  82.709  1.00 18.87
ATOM   4392  CB  ASP A 549      25.426  67.034  85.126  1.00 11.36
ATOM   4393  CG  ASP A 549      25.703  68.058  86.214  1.00 22.44
ATOM   4394  OD1 ASP A 549      25.396  69.227  86.150  1.00 25.44
ATOM   4395  OD2 ASP A 549      26.252  67.575  87.271  1.00 25.86
ATOM   4396  N   ALA A 550      23.511  64.624  84.122  1.00 13.24
ATOM   4397  CA  ALA A 550      23.269  63.709  83.004  1.00 14.70
ATOM   4398  C   ALA A 550      21.845  63.707  82.473  1.00 17.89
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ATOM   4400  CB  ALA A 550      23.713  62.280  83.335  1.00 14.77
ATOM   4401  N   ILE A 551      20.926  64.308  83.251  1.00 16.18
ATOM   4402  CA  ILE A 551      19.497  64.377  82.914  1.00 16.05
ATOM   4403  C   ILE A 551      19.182  64.894  81.523  1.00 18.70
ATOM   4404  O   ILE A 551      18.441  64.290  80.736  1.00 19.01
ATOM   4405  CB  ILE A 551      18.701  65.139  83.971  1.00 19.52
ATOM   4406  CG1 ILE A 551      18.692  64.281  85.232  1.00 20.39
ATOM   4407  CG2 ILE A 551      17.251  65.361  83.512  1.00 12.65
ATOM   4408  CD1 ILE A 551      18.167  64.995  86.485  1.00 15.78
ATOM   4409  N   PRO A 552      19.748  66.038  81.197  1.00 18.48
ATOM   4410  CA  PRO A 552      19.487  66.600  79.888  1.00 16.36
ATOM   4411  C   PRO A 552      20.084  65.736  78.795  1.00 19.64
ATOM   4412  O   PRO A 552      19.551  65.606  77.700  1.00 16.94
ATOM   4413  CB  PRO A 552      20.125  67.995  79.870  1.00 18.41
ATOM   4414  CG  PRO A 552      21.001  68.070  81.116  1.00 24.69
ATOM   4415  CD  PRO A 552      20.504  66.981  82.059  1.00 17.97
ATOM   4416  N   LEU A 553      21.226  65.144  79.075  1.00 17.67
ATOM   4417  CA  LEU A 553      21.852  64.302  78.072  1.00 15.47
ATOM   4418  C   LEU A 553      20.940  63.101  77.795  1.00 19.23
ATOM   4419  O   LEU A 553      20.704  62.655  76.681  1.00 16.64
ATOM   4420  CB  LEU A 553      23.275  63.819  78.501  1.00 13.81
ATOM   4421  CG  LEU A 553      24.239  64.905  79.002  1.00 19.25
ATOM   4422  CD1 LEU A 553      25.606  64.289  79.247  1.00 17.04
ATOM   4423  CD2 LEU A 553      24.412  65.997  77.955  1.00 18.39
ATOM   4424  N   ALA A 554      20.440  62.529  78.867  1.00 17.65
ATOM   4425  CA  ALA A 554      19.614  61.341  78.730  1.00 15.25
ATOM   4426  C   ALA A 554      18.330  61.673  78.029  1.00 19.37
ATOM   4427  O   ALA A 554      17.896  60.913  77.157  1.00 14.92
ATOM   4428  CB  ALA A 554      19.415  60.697  80.094  1.00 12.41
ATOM   4429  N   LEU A 555      17.746  62.821  78.410  1.00 14.59
ATOM   4430  CA  LEU A 555      16.514  63.224  77.750  1.00 17.50
ATOM   4431  C   LEU A 555      16.686  63.445  76.249  1.00 16.25
ATOM   4432  O   LEU A 555      15.822  63.168  75.435  1.00 15.71
ATOM   4433  CB  LEU A 555      15.921  64.531  78.318  1.00 18.40
ATOM   4434  CG  LEU A 555      15.298  64.374  79.695  1.00 23.82
ATOM   4435  CD1 LEU A 555      15.153  65.771  80.333  1.00 23.08
ATOM   4436  CD2 LEU A 555      13.934  63.692  79.583  1.00 18.63
ATOM   4437  N   LYS A 556      17.827  64.008  75.899  1.00 17.73
ATOM   4438  CA  LYS A 556      18.139  64.330  74.536  1.00 15.70
ATOM   4439  C   LYS A 556      18.285  63.076  73.702  1.00 19.09
ATOM   4440  O   LYS A 556      17.690  62.959  72.626  1.00 19.08
ATOM   4441  CB  LYS A 556      19.380  65.206  74.530  1.00 15.52
ATOM   4442  CG  LYS A 556      19.729  65.769  73.163  1.00 41.74
ATOM   4443  CD  LYS A 556      21.020  66.590  73.160  1.00 77.82
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ATOM	4444	CE	LYS	A	556	21.851	66.449	71.883	1.00	79.74
ATOM	4445	NZ	LYS	A	556	22.446	67.709	71.404	1.00	60.52
ATOM	4446	N	MET	A	557	19.089	62.128	74.207	1.00	15.27
ATOM	4447	CA	MET	A	557	19.294	60.904	73.446	1.00	13.47
ATOM	4448	C	MET	A	557	17.997	60.140	73.264	1.00	16.45
ATOM	4449	O	MET	A	557	17.723	59.507	72.253	1.00	15.63
ATOM	4450	CB	MET	A	557	20.312	59.998	74.165	1.00	14.26
ATOM	4451	CG	MET	A	557	20.499	58.682	73.405	1.00	13.00
ATOM	4452	SD	MET	A	557	21.984	57.796	73.915	1.00	16.44
ATOM	4453	CE	MET	A	557	22.027	56.574	72.596	1.00	12.39
ATOM	4454	N	ALA	A	558	17.200	60.181	74.327	1.00	18.08
ATOM	4455	CA	ALA	A	558	15.955	59.438	74.323	1.00	17.49
ATOM	4456	C	ALA	A	558	14.968	59.922	73.292	1.00	23.08
ATOM	4457	O	ALA	A	558	14.221	59.153	72.723	1.00	21.14
ATOM	4458	CB	ALA	A	558	15.316	59.439	75.705	1.00	16.55
ATOM	4459	N	THR	A	559	14.951	61.220	73.082	1.00	18.89
ATOM	4460	CA	THR	A	559	13.980	61.798	72.186	1.00	19.50
ATOM	4461	C	THR	A	559	14.542	62.125	70.830	1.00	22.12
ATOM	4462	O	THR	A	559	13.804	62.219	69.862	1.00	23.28
ATOM	4463	CB	THR	A	559	13.418	63.078	72.824	1.00	25.23
ATOM	4464	OG1	THR	A	559	14.493	63.999	73.001	1.00	22.20
ATOM	4465	CG2	THR	A	559	12.734	62.723	74.147	1.00	18.19
ATOM	4466	N	GLU	A	560	15.841	62.316	70.756	1.00	16.68
ATOM	4467	CA	GLU	A	560	16.399	62.646	69.479	1.00	18.60
ATOM	4468	C	GLU	A	560	16.492	61.448	68.545	1.00	26.45
ATOM	4469	O	GLU	A	560	16.714	61.608	67.344	1.00	21.93
ATOM	4470	CB	GLU	A	560	17.748	63.317	69.640	1.00	21.55
ATOM	4471	CG	GLU	A	560	17.623	64.757	70.136	1.00	38.31
ATOM	4472	CD	GLU	A	560	18.990	65.352	70.221	1.00	55.37
ATOM	4473	OE1	GLU	A	560	20.007	64.691	70.053	1.00	40.21
ATOM	4474	OE2	GLU	A	560	18.946	66.627	70.504	1.00	55.04
ATOM	4475	N	GLN	A	561	16.344	60.251	69.101	1.00	20.47
ATOM	4476	CA	GLN	A	561	16.340	59.043	68.291	1.00	19.24
ATOM	4477	C	GLN	A	561	15.283	58.189	68.921	1.00	18.06
ATOM	4478	O	GLN	A	561	14.874	58.520	70.022	1.00	16.87
ATOM	4479	CB	GLN	A	561	17.684	58.307	68.136	1.00	20.45
ATOM	4480	CG	GLN	A	561	18.341	58.001	69.495	1.00	21.17
ATOM	4481	CD	GLN	A	561	17.692	56.815	70.165	1.00	21.31
ATOM	4482	OE1	GLN	A	561	17.302	56.877	71.344	1.00	23.07
ATOM	4483	NE2	GLN	A	561	17.543	55.758	69.379	1.00	11.21
ATOM	4484	N	GLY	A	562	14.821	57.148	68.239	1.00	16.15
ATOM	4485	CA	GLY	A	562	13.758	56.367	68.827	1.00	14.79
ATOM	4486	C	GLY	A	562	13.919	54.872	68.750	1.00	17.42
ATOM	4487	O	GLY	A	562	12.941	54.134	68.842	1.00	22.06
ATOM	4488	N	ARG	A	563	15.152	54.424	68.598	1.00	18.35
ATOM	4489	CA	ARG	A	563	15.453	52.990	68.617	1.00	18.80
ATOM	4490	C	ARG	A	563	15.023	52.501	70.018	1.00	16.67
ATOM	4491	O	ARG	A	563	15.518	52.925	71.085	1.00	14.27
ATOM	4492	CB	ARG	A	563	16.949	52.812	68.321	1.00	16.78
ATOM	4493	CG	ARG	A	563	17.394	51.363	68.216	1.00	14.43
ATOM	4494	CD	ARG	A	563	18.911	51.276	68.095	1.00	15.41
ATOM	4495	NE	ARG	A	563	19.423	49.897	68.119	1.00	19.33
ATOM	4496	CZ	ARG	A	563	20.683	49.669	67.774	1.00	19.66
ATOM	4497	NH1	ARG	A	563	21.482	50.681	67.417	1.00	10.67
ATOM	4498	NH2	ARG	A	563	21.148	48.428	67.779	1.00	13.38
ATOM	4499	N	MET	A	564	14.003	51.648	70.069	1.00	13.84
ATOM	4500	CA	MET	A	564	13.447	51.247	71.369	1.00	13.05
ATOM	4501	C	MET	A	564	14.443	50.787	72.419	1.00	18.69
ATOM	4502	O	MET	A	564	14.257	50.973	73.628	1.00	12.40
ATOM	4503	CB	MET	A	564	12.315	50.212	71.198	1.00	13.81
ATOM	4504	CG	MET	A	564	11.159	50.825	70.424	1.00	16.20

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ATOM   4505  SD  MET A 564       9.692  49.805  70.530  1.00 21.23
ATOM   4506  CE  MET A 564      10.114  48.581  69.265  1.00 17.64
ATOM   4507  N   LYS A 565      15.464  50.097  71.892  1.00 16.37
ATOM   4508  CA  LYS A 565      16.521  49.537  72.701  1.00 13.75
ATOM   4509  C   LYS A 565      17.129  50.623  73.582  1.00 16.90
ATOM   4510  O   LYS A 565      17.493  50.376  74.735  1.00 14.97
ATOM   4511  CB  LYS A 565      17.549  48.885  71.767  1.00 11.37
ATOM   4512  CG  LYS A 565      18.793  48.371  72.459  1.00 12.72
ATOM   4513  CD  LYS A 565      19.962  48.100  71.525  1.00 17.72
ATOM   4514  CE  LYS A 565      21.060  47.336  72.239  1.00 19.39
ATOM   4515  NZ  LYS A 565      22.030  46.721  71.308  1.00 15.47
ATOM   4516  N   PHE A 566      17.211  51.847  73.057  1.00 12.01
ATOM   4517  CA  PHE A 566      17.801  52.912  73.846  1.00 12.25
ATOM   4518  C   PHE A 566      16.739  53.770  74.509  1.00 15.74
ATOM   4519  O   PHE A 566      16.843  54.177  75.661  1.00 12.91
ATOM   4520  CB  PHE A 566      18.641  53.814  72.932  1.00 12.87
ATOM   4521  CG  PHE A 566      19.744  53.117  72.165  1.00 14.44
ATOM   4522  CD1 PHE A 566      20.465  52.053  72.714  1.00 13.84
ATOM   4523  CD2 PHE A 566      20.111  53.577  70.894  1.00 15.31
ATOM   4524  CE1 PHE A 566      21.510  51.434  72.014  1.00 13.86
ATOM   4525  CE2 PHE A 566      21.145  52.977  70.172  1.00 14.39
ATOM   4526  CZ  PHE A 566      21.849  51.910  70.744  1.00 15.76
ATOM   4527  N   THR A 567      15.721  54.095  73.724  1.00 16.10
ATOM   4528  CA  THR A 567      14.642  54.966  74.184  1.00 14.70
ATOM   4529  C   THR A 567      13.876  54.518  75.423  1.00 14.32
ATOM   4530  O   THR A 567      13.615  55.315  76.346  1.00 14.88
ATOM   4531  CB  THR A 567      13.707  55.409  73.030  1.00 14.81
ATOM   4532  OG1 THR A 567      14.465  56.204  72.148  1.00 15.28
ATOM   4533  CG2 THR A 567      12.520  56.196  73.596  1.00 14.89
ATOM   4534  N   ARG A 568      13.478  53.245  75.412  1.00 12.20
ATOM   4535  CA  ARG A 568      12.697  52.764  76.533  1.00 13.57
ATOM   4536  C   ARG A 568      13.393  52.797  77.876  1.00 14.85
ATOM   4537  O   ARG A 568      12.896  53.312  78.861  1.00 14.39
ATOM   4538  CB  ARG A 568      12.133  51.400  76.218  1.00 13.49
ATOM   4539  CG  ARG A 568      11.021  51.467  75.155  1.00 14.02
ATOM   4540  CD  ARG A 568      10.387  50.098  74.884  1.00  9.84
ATOM   4541  NE  ARG A 568       9.662  49.607  76.063  1.00 13.61
ATOM   4542  CZ  ARG A 568       9.236  48.368  76.197  1.00 17.32
ATOM   4543  NH1 ARG A 568       9.471  47.427  75.275  1.00 13.23
ATOM   4544  NH2 ARG A 568       8.566  48.053  77.293  1.00 13.32
ATOM   4545  N   PRO A 569      14.577  52.237  77.948  1.00 12.95
ATOM   4546  CA  PRO A 569      15.294  52.206  79.229  1.00 10.82
ATOM   4547  C   PRO A 569      15.810  53.574  79.653  1.00 15.13
ATOM   4548  O   PRO A 569      15.977  53.859  80.849  1.00 14.45
ATOM   4549  CB  PRO A 569      16.479  51.262  79.000  1.00 14.29
ATOM   4550  CG  PRO A 569      16.245  50.553  77.659  1.00 17.55
ATOM   4551  CD  PRO A 569      15.224  51.385  76.897  1.00 16.15
ATOM   4552  N   LEU A 570      16.069  54.462  78.685  1.00 15.08
ATOM   4553  CA  LEU A 570      16.502  55.813  79.082  1.00 16.35
ATOM   4554  C   LEU A 570      15.321  56.509  79.784  1.00 19.34
ATOM   4555  O   LEU A 570      15.401  57.045  80.898  1.00 16.13
ATOM   4556  CB  LEU A 570      16.944  56.615  77.840  1.00 16.51
ATOM   4557  CG  LEU A 570      18.372  56.269  77.386  1.00 18.67
ATOM   4558  CD1 LEU A 570      18.737  57.028  76.110  1.00 16.85
ATOM   4559  CD2 LEU A 570      19.392  56.601  78.486  1.00 14.01
ATOM   4560  N   PHE A 571      14.161  56.435  79.129  1.00 14.02
ATOM   4561  CA  PHE A 571      12.978  57.007  79.732  1.00 14.67
ATOM   4562  C   PHE A 571      12.684  56.323  81.054  1.00 18.94
ATOM   4563  O   PHE A 571      12.257  56.933  82.030  1.00 18.09
ATOM   4564  CB  PHE A 571      11.721  56.805  78.872  1.00 14.94
ATOM   4565  CG  PHE A 571      11.462  57.993  78.014  1.00 17.38
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ATOM   4566  CD1 PHE A 571      11.035  59.194  78.591  1.00 18.00
ATOM   4567  CD2 PHE A 571      11.634  57.902  76.633  1.00 19.72
ATOM   4568  CE1 PHE A 571      10.768  60.317  77.805  1.00 17.86
ATOM   4569  CE2 PHE A 571      11.358  59.016  75.836  1.00 23.80
ATOM   4570  CZ  PHE A 571      10.933  60.213  76.422  1.00 22.47
ATOM   4571  N   LYS A 572      12.839  55.023  81.080  1.00 14.21
ATOM   4572  CA  LYS A 572      12.530  54.361  82.325  1.00 14.07
ATOM   4573  C   LYS A 572      13.476  54.788  83.444  1.00 16.22
ATOM   4574  O   LYS A 572      13.123  54.998  84.620  1.00 16.74
ATOM   4575  CB  LYS A 572      12.533  52.850  82.147  1.00 15.58
ATOM   4576  CG  LYS A 572      11.179  52.157  82.243  1.00 32.41
ATOM   4577  CD  LYS A 572      11.197  50.722  81.697  1.00 46.79
ATOM   4578  CE  LYS A 572      11.249  50.620  80.160  1.00 56.38
ATOM   4579  NZ  LYS A 572      11.823  49.373  79.593  1.00 42.31
ATOM   4580  N   ASP A 573      14.735  54.914  83.089  1.00 14.00
ATOM   4581  CA  ASP A 573      15.671  55.286  84.148  1.00 15.33
ATOM   4582  C   ASP A 573      15.394  56.675  84.662  1.00 15.63
ATOM   4583  O   ASP A 573      15.531  56.959  85.850  1.00 15.64
ATOM   4584  CB  ASP A 573      17.137  55.288  83.627  1.00 14.94
ATOM   4585  CG  ASP A 573      17.688  53.889  83.452  1.00 22.26
ATOM   4586  OD1 ASP A 573      17.054  52.891  83.773  1.00 18.66
ATOM   4587  OD2 ASP A 573      18.923  53.848  82.983  1.00 18.27
ATOM   4588  N   LEU A 574      15.090  57.554  83.708  1.00 12.68
ATOM   4589  CA  LEU A 574      14.851  58.926  84.092  1.00 11.33
ATOM   4590  C   LEU A 574      13.611  59.053  84.970  1.00 22.78
ATOM   4591  O   LEU A 574      13.513  59.923  85.837  1.00 18.71
ATOM   4592  CB  LEU A 574      14.682  59.802  82.863  1.00 10.39
ATOM   4593  CG  LEU A 574      15.953  60.021  82.061  1.00 16.41
ATOM   4594  CD1 LEU A 574      15.501  60.352  80.630  1.00 16.48
ATOM   4595  CD2 LEU A 574      16.785  61.200  82.608  1.00 12.08
ATOM   4596  N   ALA A 575      12.638  58.173  84.726  1.00 17.79
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ATOM   4598  C   ALA A 575      11.720  57.682  86.856  1.00 17.98
ATOM   4599  O   ALA A 575      11.050  58.033  87.801  1.00 17.45
ATOM   4600  CB  ALA A 575      10.325  57.449  84.820  1.00 17.20
ATOM   4601  N   ALA A 576      12.703  56.801  86.972  1.00 14.91
ATOM   4602  CA  ALA A 576      13.024  56.222  88.272  1.00 12.59
ATOM   4603  C   ALA A 576      13.930  57.135  89.097  1.00 19.97
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ATOM   4605  CB  ALA A 576      13.732  54.881  88.146  1.00 16.01
ATOM   4606  N   PHE A 577      14.474  58.152  88.469  1.00 15.13
ATOM   4607  CA  PHE A 577      15.337  59.105  89.161  1.00 15.19
ATOM   4608  C   PHE A 577      14.412  60.219  89.660  1.00 19.07
ATOM   4609  O   PHE A 577      13.790  60.932  88.868  1.00 16.74
ATOM   4610  CB  PHE A 577      16.447  59.652  88.210  1.00 14.02
ATOM   4611  CG  PHE A 577      17.494  60.595  88.820  1.00 15.39
ATOM   4612  CD1 PHE A 577      17.678  60.707  90.202  1.00 17.32
ATOM   4613  CD2 PHE A 577      18.295  61.380  87.983  1.00 15.42
ATOM   4614  CE1 PHE A 577      18.646  61.570  90.727  1.00 18.05
ATOM   4615  CE2 PHE A 577      19.272  62.236  88.483  1.00 18.23
ATOM   4616  CZ  PHE A 577      19.442  62.330  89.866  1.00 18.02
ATOM   4617  N   ASP A 578      14.285  60.335  90.983  1.00 19.21
ATOM   4618  CA  ASP A 578      13.394  61.327  91.584  1.00 19.27
ATOM   4619  C   ASP A 578      13.568  62.692  90.981  1.00 18.95
ATOM   4620  O   ASP A 578      12.577  63.347  90.660  1.00 18.48
ATOM   4621  CB  ASP A 578      13.457  61.342  93.130  1.00 28.60
ATOM   4622  CG  ASP A 578      14.714  61.992  93.690  1.00 55.79
ATOM   4623  OD1 ASP A 578      15.779  62.135  93.064  1.00 45.74
ATOM   4624  OD2 ASP A 578      14.512  62.401  94.929  1.00 67.85
ATOM   4625  N   LYS A 579      14.839  63.083  90.791  1.00 17.12
ATOM   4626  CA  LYS A 579      15.185  64.352  90.194  1.00 13.88
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ATOM 4627 C LYS A 579 14.693 64.569 88.758 1.00 21.03
ATOM 4628 O LYS A 579 14.338 65.689 88.386 1.00 20.91
ATOM 4629 CB LYS A 579 16.669 64.621 90.293 1.00 13.46
ATOM 4630 CG LYS A 579 17.159 64.570 91.724 1.00 33.01
ATOM 4631 CD LYS A 579 16.890 65.878 92.442 1.00 55.78
ATOM 4632 CE LYS A 579 16.292 65.662 93.816 1.00 58.11
ATOM 4633 NZ LYS A 579 17.121 66.260 94.867 1.00 54.50
ATOM 4634 N SER A 580 14.646 63.553 87.897 1.00 14.45
ATOM 4635 CA SER A 580 14.187 63.844 86.540 1.00 13.57
ATOM 4636 C SER A 580 12.798 63.298 86.228 1.00 20.81
ATOM 4637 O SER A 580 12.313 63.384 85.103 1.00 19.66
ATOM 4638 CB SER A 580 15.113 63.091 85.601 1.00 12.97
ATOM 4639 OG SER A 580 15.350 61.809 86.186 1.00 17.95
ATOM 4640 N HIS A 581 12.184 62.664 87.196 1.00 16.52
ATOM 4641 CA HIS A 581 10.897 62.042 86.971 1.00 16.52
ATOM 4642 C HIS A 581 9.816 62.866 86.281 1.00 21.39
ATOM 4643 O HIS A 581 9.250 62.522 85.234 1.00 18.75
ATOM 4644 CB HIS A 581 10.389 61.487 88.289 1.00 15.62
ATOM 4645 CG HIS A 581 9.034 60.927 88.100 1.00 22.66
ATOM 4646 ND1 HIS A 581 7.914 61.748 88.110 1.00 27.83
ATOM 4647 CD2 HIS A 581 8.623 59.644 87.899 1.00 27.04
ATOM 4648 CE1 HIS A 581 6.843 60.975 87.926 1.00 27.26
ATOM 4649 NE2 HIS A 581 7.242 59.715 87.789 1.00 28.84
ATOM 4650 N ASP A 582 9.515 63.986 86.884 1.00 17.59
ATOM 4651 CA ASP A 582 8.491 64.831 86.322 1.00 20.99
ATOM 4652 C ASP A 582 8.831 65.284 84.927 1.00 24.43
ATOM 4653 O ASP A 582 8.013 65.343 84.030 1.00 21.69
ATOM 4654 CB ASP A 582 8.331 66.085 87.197 1.00 25.08
ATOM 4655 CG ASP A 582 7.626 65.730 88.466 1.00 30.98
ATOM 4656 OD1 ASP A 582 7.129 64.638 88.645 1.00 36.19
ATOM 4657 OD2 ASP A 582 7.659 66.680 89.359 1.00 38.67
ATOM 4658 N GLN A 583 10.075 65.649 84.762 1.00 20.38
ATOM 4659 CA GLN A 583 10.451 66.076 83.465 1.00 19.54
ATOM 4660 C GLN A 583 10.423 64.938 82.431 1.00 23.45
ATOM 4661 O GLN A 583 10.182 65.148 81.229 1.00 23.51
ATOM 4662 CB GLN A 583 11.857 66.642 83.573 1.00 19.50
ATOM 4663 CG GLN A 583 12.188 67.300 82.240 1.00 21.61
ATOM 4664 CD GLN A 583 13.503 68.019 82.370 1.00 44.67
ATOM 4665 OE1 GLN A 583 14.236 67.818 83.357 1.00 39.11
ATOM 4666 NE2 GLN A 583 13.778 68.840 81.373 1.00 40.61
ATOM 4667 N ALA A 584 10.706 63.718 82.866 1.00 18.70
ATOM 4668 CA ALA A 584 10.700 62.595 81.927 1.00 15.00
ATOM 4669 C ALA A 584 9.307 62.411 81.375 1.00 19.16
ATOM 4670 O ALA A 584 9.101 62.211 80.176 1.00 19.25
ATOM 4671 CB ALA A 584 11.043 61.288 82.642 1.00 13.44
ATOM 4672 N VAL A 585 8.356 62.452 82.316 1.00 15.46
ATOM 4673 CA VAL A 585 6.941 62.258 81.999 1.00 18.57
ATOM 4674 C VAL A 585 6.418 63.339 81.064 1.00 25.46
ATOM 4675 O VAL A 585 5.743 63.106 80.055 1.00 23.63
ATOM 4676 CB VAL A 585 6.090 62.120 83.274 1.00 23.07
ATOM 4677 CG1 VAL A 585 4.610 62.298 82.946 1.00 23.53
ATOM 4678 CG2 VAL A 585 6.340 60.775 83.966 1.00 21.15
ATOM 4679 N ARG A 586 6.792 64.564 81.405 1.00 23.81
ATOM 4680 CA ARG A 586 6.395 65.688 80.615 1.00 22.41
ATOM 4681 C ARG A 586 6.974 65.628 79.223 1.00 22.13
ATOM 4682 O ARG A 586 6.283 65.909 78.254 1.00 20.69
ATOM 4683 CB ARG A 586 6.695 67.000 81.329 1.00 21.27
ATOM 4684 CG ARG A 586 6.573 68.251 80.461 1.00 39.32
ATOM 4685 CD ARG A 586 7.134 69.519 81.129 1.00 45.58
ATOM 4686 NE ARG A 586 7.498 69.270 82.525 1.00 68.78
ATOM 4687 CZ ARG A 586 8.712 69.427 83.074 1.00 82.97

ATOM 4688 NH1 ARG A 586 9.767 69.873 82.357 1.00 50.55
ATOM 4689 NH2 ARG A 586 8.842 69.129 84.383 1.00 31.22
ATOM 4690 N THR A 587 8.231 65.247 79.095 1.00 19.40
ATOM 4691 CA THR A 587 8.856 65.157 77.781 1.00 18.84
ATOM 4692 C THR A 587 8.150 64.170 76.882 1.00 20.71
ATOM 4693 O THR A 587 7.885 64.391 75.702 1.00 23.03
ATOM 4694 CB THR A 587 10.313 64.746 77.975 1.00 23.70
ATOM 4695 OG1 THR A 587 10.887 65.693 78.846 1.00 21.83
ATOM 4696 CG2 THR A 587 11.048 64.672 76.654 1.00 21.38
ATOM 4697 N TYR A 588 7.822 63.043 77.464 1.00 21.74
ATOM 4698 CA TYR A 588 7.137 62.033 76.693 1.00 19.43
ATOM 4699 C TYR A 588 5.808 62.573 76.151 1.00 24.31
ATOM 4700 O TYR A 588 5.450 62.483 74.963 1.00 26.68
ATOM 4701 CB TYR A 588 6.846 60.854 77.638 1.00 18.46
ATOM 4702 CG TYR A 588 5.842 59.904 77.014 1.00 21.76
ATOM 4703 CD1 TYR A 588 6.169 59.136 75.891 1.00 22.44
ATOM 4704 CD2 TYR A 588 4.549 59.808 77.540 1.00 22.19
ATOM 4705 CE1 TYR A 588 5.217 58.274 75.335 1.00 26.93
ATOM 4706 CE2 TYR A 588 3.584 58.961 76.999 1.00 19.19
ATOM 4707 CZ TYR A 588 3.936 58.191 75.890 1.00 25.45
ATOM 4708 OH TYR A 588 3.008 57.335 75.359 1.00 24.42
ATOM 4709 N GLN A 589 5.039 63.110 77.088 1.00 23.42
ATOM 4710 CA GLN A 589 3.727 63.642 76.762 1.00 22.93
ATOM 4711 C GLN A 589 3.806 64.594 75.596 1.00 20.18
ATOM 4712 O GLN A 589 2.957 64.626 74.707 1.00 23.55
ATOM 4713 CB GLN A 589 3.139 64.384 77.981 1.00 25.07
ATOM 4714 CG GLN A 589 2.683 63.449 79.119 1.00 21.54
ATOM 4715 CD GLN A 589 1.470 62.587 78.765 1.00 41.81
ATOM 4716 OE1 GLN A 589 1.197 62.264 77.606 1.00 37.70
ATOM 4717 NE2 GLN A 589 0.721 62.186 79.779 1.00 58.94
ATOM 4718 N GLU A 590 4.844 65.400 75.649 1.00 17.93
ATOM 4719 CA GLU A 590 5.097 66.416 74.644 1.00 19.01
ATOM 4720 C GLU A 590 5.566 65.826 73.363 1.00 26.93
ATOM 4721 O GLU A 590 5.393 66.453 72.312 1.00 23.86
ATOM 4722 CB GLU A 590 6.176 67.452 75.021 1.00 20.73
ATOM 4723 CG GLU A 590 5.706 68.358 76.180 1.00 36.88
ATOM 4724 CD GLU A 590 6.810 69.187 76.769 1.00 62.73
ATOM 4725 OE1 GLU A 590 7.988 69.112 76.403 1.00 55.19
ATOM 4726 OE2 GLU A 590 6.341 69.975 77.718 1.00 40.10
ATOM 4727 N HIS A 591 6.203 64.666 73.476 1.00 23.79
ATOM 4728 CA HIS A 591 6.700 64.086 72.250 1.00 23.24
ATOM 4729 C HIS A 591 5.818 63.013 71.689 1.00 20.50
ATOM 4730 O HIS A 591 5.965 62.619 70.541 1.00 24.92
ATOM 4731 CB HIS A 591 8.076 63.446 72.481 1.00 22.84
ATOM 4732 CG HIS A 591 9.175 64.446 72.384 1.00 25.11
ATOM 4733 ND1 HIS A 591 9.381 65.385 73.378 1.00 28.84
ATOM 4734 CD2 HIS A 591 10.092 64.667 71.403 1.00 26.79
ATOM 4735 CE1 HIS A 591 10.408 66.147 72.984 1.00 27.18
ATOM 4736 NE2 HIS A 591 10.853 65.745 71.796 1.00 26.51
ATOM 4737 N LYS A 592 4.939 62.487 72.503 1.00 19.36
ATOM 4738 CA LYS A 592 4.202 61.366 71.988 1.00 19.14
ATOM 4739 C LYS A 592 3.553 61.382 70.613 1.00 28.03
ATOM 4740 O LYS A 592 3.592 60.409 69.856 1.00 23.29
ATOM 4741 CB LYS A 592 3.431 60.669 73.048 1.00 18.80
ATOM 4742 CG LYS A 592 2.321 61.545 73.519 1.00 26.37
ATOM 4743 CD LYS A 592 1.414 60.713 74.400 1.00 33.29
ATOM 4744 CE LYS A 592 0.018 61.301 74.523 1.00 45.98
ATOM 4745 NZ LYS A 592 -0.530 61.163 75.874 1.00 25.02
ATOM 4746 N ALA A 593 2.905 62.494 70.300 1.00 29.63
ATOM 4747 CA ALA A 593 2.225 62.650 69.016 1.00 26.27
ATOM 4748 C ALA A 593 3.157 62.524 67.808 1.00 26.27

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ATOM   4749  O   ALA A 593       2.741  62.121  66.732  1.00 28.39
ATOM   4750  CB  ALA A 593       1.558  64.018  68.998  1.00 24.94
ATOM   4751  N   SER A 594       4.420  62.891  67.988  1.00 21.56
ATOM   4752  CA  SER A 594       5.404  62.867  66.930  1.00 22.18
ATOM   4753  C   SER A 594       6.238  61.590  66.949  1.00 22.38
ATOM   4754  O   SER A 594       7.160  61.444  66.137  1.00 20.87
ATOM   4755  CB  SER A 594       6.352  64.049  67.098  1.00 29.27
ATOM   4756  OG  SER A 594       7.286  63.814  68.156  1.00 45.26
ATOM   4757  N   MET A 595       5.922  60.678  67.858  1.00 17.72
ATOM   4758  CA  MET A 595       6.732  59.453  67.945  1.00 17.90
ATOM   4759  C   MET A 595       6.240  58.295  67.114  1.00 21.97
ATOM   4760  O   MET A 595       5.105  58.257  66.683  1.00 26.36
ATOM   4761  CB  MET A 595       6.717  58.931  69.396  1.00 17.35
ATOM   4762  CG  MET A 595       7.616  59.720  70.321  1.00 18.64
ATOM   4763  SD  MET A 595       7.451  59.068  71.999  1.00 25.54
ATOM   4764  CE  MET A 595       7.775  60.523  72.990  1.00 32.21
ATOM   4765  N   HIS A 596       7.066  57.284  66.954  1.00 15.02
ATOM   4766  CA  HIS A 596       6.593  56.105  66.258  1.00 16.62
ATOM   4767  C   HIS A 596       5.458  55.524  67.111  1.00 19.77
ATOM   4768  O   HIS A 596       5.474  55.605  68.324  1.00 19.53
ATOM   4769  CB  HIS A 596       7.756  55.103  66.052  1.00 17.44
ATOM   4770  CG  HIS A 596       7.280  53.844  65.414  1.00 20.36
ATOM   4771  ND1 HIS A 596       7.474  53.623  64.059  1.00 22.76
ATOM   4772  CD2 HIS A 596       6.582  52.790  65.937  1.00 19.37
ATOM   4773  CE1 HIS A 596       6.928  52.443  63.770  1.00 21.23
ATOM   4774  NE2 HIS A 596       6.375  51.935  64.879  1.00 22.61
ATOM   4775  N   PRO A 597       4.425  54.948  66.507  1.00 19.72
ATOM   4776  CA  PRO A 597       3.284  54.409  67.233  1.00 17.32
ATOM   4777  C   PRO A 597       3.515  53.268  68.221  1.00 22.24
ATOM   4778  O   PRO A 597       2.887  53.165  69.277  1.00 20.86
ATOM   4779  CB  PRO A 597       2.228  54.031  66.181  1.00 15.13
ATOM   4780  CG  PRO A 597       2.989  53.918  64.893  1.00 20.16
ATOM   4781  CD  PRO A 597       4.195  54.843  65.045  1.00 19.53
ATOM   4782  N   VAL A 598       4.381  52.340  67.895  1.00 17.95
ATOM   4783  CA  VAL A 598       4.575  51.277  68.868  1.00 17.06
ATOM   4784  C   VAL A 598       5.463  51.830  69.993  1.00 16.39
ATOM   4785  O   VAL A 598       5.188  51.629  71.176  1.00 18.72
ATOM   4786  CB  VAL A 598       5.175  50.039  68.180  1.00 20.87
ATOM   4787  CG1 VAL A 598       5.739  48.974  69.142  1.00 15.98
ATOM   4788  CG2 VAL A 598       4.169  49.498  67.132  1.00 17.75
ATOM   4789  N   THR A 599       6.521  52.548  69.605  1.00 17.91
ATOM   4790  CA  THR A 599       7.370  53.125  70.636  1.00 20.42
ATOM   4791  C   THR A 599       6.544  53.965  71.615  1.00 25.40
ATOM   4792  O   THR A 599       6.683  53.931  72.848  1.00 18.93
ATOM   4793  CB  THR A 599       8.436  53.999  69.997  1.00 17.80
ATOM   4794  OG1 THR A 599       9.082  53.238  68.989  1.00 19.92
ATOM   4795  CG2 THR A 599       9.399  54.486  71.090  1.00 17.59
ATOM   4796  N   ALA A 600       5.657  54.749  71.018  1.00 18.73
ATOM   4797  CA  ALA A 600       4.798  55.590  71.796  1.00 17.65
ATOM   4798  C   ALA A 600       3.971  54.764  72.739  1.00 20.00
ATOM   4799  O   ALA A 600       3.867  55.053  73.932  1.00 21.50
ATOM   4800  CB  ALA A 600       3.869  56.344  70.879  1.00 19.26
ATOM   4801  N   MET A 601       3.344  53.731  72.218  1.00 17.31
ATOM   4802  CA  MET A 601       2.539  52.928  73.126  1.00 15.28
ATOM   4803  C   MET A 601       3.409  52.308  74.224  1.00 17.52
ATOM   4804  O   MET A 601       3.018  52.245  75.371  1.00 15.39
ATOM   4805  CB  MET A 601       1.761  51.815  72.369  1.00 16.44
ATOM   4806  CG  MET A 601       1.008  50.813  73.242  1.00 20.22
ATOM   4807  SD  MET A 601       1.962  49.492  74.103  1.00 24.22
ATOM   4808  CE  MET A 601       2.327  48.392  72.695  1.00 18.59
ATOM   4809  N   LEU A 602       4.580  51.778  73.889  1.00 16.21
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ATOM   4810  CA  LEU A 602       5.389  51.117  74.924  1.00 16.19
ATOM   4811  C   LEU A 602       5.940  52.055  76.027  1.00 18.15
ATOM   4812  O   LEU A 602       5.962  51.722  77.214  1.00 18.36
ATOM   4813  CB  LEU A 602       6.507  50.267  74.269  1.00 14.21
ATOM   4814  CG  LEU A 602       5.987  49.058  73.508  1.00 18.02
ATOM   4815  CD1 LEU A 602       7.100  48.467  72.642  1.00 17.78
ATOM   4816  CD2 LEU A 602       5.502  48.030  74.515  1.00 21.84
ATOM   4817  N   VAL A 603       6.426  53.224  75.617  1.00 15.71
ATOM   4818  CA  VAL A 603       6.962  54.208  76.549  1.00 15.67
ATOM   4819  C   VAL A 603       5.877  54.648  77.537  1.00 17.35
ATOM   4820  O   VAL A 603       6.093  54.733  78.741  1.00 18.72
ATOM   4821  CB  VAL A 603       7.665  55.345  75.807  1.00 19.16
ATOM   4822  CG1 VAL A 603       8.035  56.477  76.764  1.00 15.61
ATOM   4823  CG2 VAL A 603       8.943  54.837  75.115  1.00 17.56
ATOM   4824  N   GLY A 604       4.661  54.851  77.027  1.00 14.92
ATOM   4825  CA  GLY A 604       3.535  55.262  77.879  1.00 14.02
ATOM   4826  C   GLY A 604       3.239  54.206  78.898  1.00 17.85
ATOM   4827  O   GLY A 604       2.984  54.443  80.075  1.00 21.21
ATOM   4828  N   LYS A 605       3.306  52.987  78.426  1.00 16.57
ATOM   4829  CA  LYS A 605       3.127  51.873  79.330  1.00 18.08
ATOM   4830  C   LYS A 605       4.251  51.892  80.348  1.00 22.76
ATOM   4831  O   LYS A 605       4.034  51.859  81.558  1.00 26.27
ATOM   4832  CB  LYS A 605       3.190  50.541  78.607  1.00 22.73
ATOM   4833  CG  LYS A 605       1.870  49.811  78.714  1.00 40.15
ATOM   4834  CD  LYS A 605       1.919  48.377  78.211  1.00 57.40
ATOM   4835  CE  LYS A 605       1.068  47.461  79.074  1.00 75.31
ATOM   4836  NZ  LYS A 605       1.808  46.387  79.758  1.00 74.64
ATOM   4837  N   ASP A 606       5.470  51.943  79.836  1.00 17.17
ATOM   4838  CA  ASP A 606       6.607  51.972  80.718  1.00 16.61
ATOM   4839  C   ASP A 606       6.442  53.059  81.738  1.00 19.46
ATOM   4840  O   ASP A 606       6.790  52.848  82.884  1.00 19.57
ATOM   4841  CB  ASP A 606       7.945  52.255  79.990  1.00 16.98
ATOM   4842  CG  ASP A 606       8.365  51.063  79.187  1.00 21.21
ATOM   4843  OD1 ASP A 606       7.944  49.933  79.376  1.00 20.21
ATOM   4844  OD2 ASP A 606       9.189  51.355  78.249  1.00 18.07
ATOM   4845  N   LEU A 607       5.974  54.207  81.306  1.00 16.61
ATOM   4846  CA  LEU A 607       5.863  55.352  82.211  1.00 20.64
ATOM   4847  C   LEU A 607       4.586  55.384  83.026  1.00 27.05
ATOM   4848  O   LEU A 607       4.361  56.274  83.862  1.00 23.83
ATOM   4849  CB  LEU A 607       5.991  56.641  81.388  1.00 23.11
ATOM   4850  CG  LEU A 607       7.377  57.301  81.464  1.00 28.84
ATOM   4851  CD1 LEU A 607       8.508  56.323  81.711  1.00 29.33
ATOM   4852  CD2 LEU A 607       7.650  58.116  80.214  1.00 19.22
ATOM   4853  N   LYS A 608       3.739  54.409  82.739  1.00 21.45
ATOM   4854  CA  LYS A 608       2.504  54.308  83.446  1.00 22.51
ATOM   4855  C   LYS A 608       1.657  55.529  83.202  1.00 31.79
ATOM   4856  O   LYS A 608       0.933  56.008  84.076  1.00 34.10
ATOM   4857  CB  LYS A 608       2.810  54.200  84.918  1.00 24.85
ATOM   4858  CG  LYS A 608       3.190  52.782  85.308  1.00 45.51
ATOM   4859  CD  LYS A 608       3.932  52.718  86.635  1.00 76.45
ATOM   4860  CE  LYS A 608       4.251  51.291  87.078  1.00100.00
ATOM   4861  NZ  LYS A 608       4.137  51.050  88.533  1.00100.00
ATOM   4862  N   VAL A 609       1.781  56.084  82.021  1.00 29.53
ATOM   4863  CA  VAL A 609       0.962  57.231  81.738  1.00 32.22
ATOM   4864  C   VAL A 609      -0.257  56.755  80.958  1.00 47.38
ATOM   4865  O   VAL A 609      -0.150  55.800  80.186  1.00 49.22
ATOM   4866  CB  VAL A 609       1.679  58.328  80.966  1.00 38.27
ATOM   4867  CG1 VAL A 609       3.188  58.240  81.067  1.00 38.12
ATOM   4868  CG2 VAL A 609       1.227  58.313  79.515  1.00 39.79
ATOM   4869  N   ASP A 610      -1.402  57.415  81.173  1.00 49.29
ATOM   4870  CA  ASP A 610      -2.675  57.124  80.510  1.00 98.66
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ATOM   4871  C    ASP A 610      -3.541  56.207  81.365  1.00100.00
ATOM   4872  O    ASP A 610      -3.950  56.568  82.470  1.00 78.31
ATOM   4873  CB   ASP A 610      -2.550  56.631  79.044  1.00100.00
ATOM   4874  CG   ASP A 610      -1.930  57.631  78.091  1.00100.00
ATOM   4875  OD1 ASP A 610      -2.251  58.807  78.062  1.00 99.48
ATOM   4876  OD2 ASP A 610      -1.019  57.111  77.288  1.00100.00
TER    4877       ASP A 610
ATOM   4878 ZN2+ ZN   Z   1      16.972  39.340  64.102  1.00 16.33
ATOM   4879 YB3+ YB   Y   1      42.669  51.366  99.201  1.00 18.06
ATOM   4880 YB3+ YB   Y   2     -13.732  57.497  52.155  0.50 46.53
ATOM   4881 YB3+ YB   Y   3     -10.443  58.443  52.469  0.50 30.25
ATOM   4882  N2   BES B   1      13.712  41.186  63.145  1.00 25.72
ATOM   4883  C1   BES B   1      14.450  41.733  64.255  1.00 24.13
ATOM   4884  C6   BES B   1      13.749  42.939  64.880  1.00 23.84
ATOM   4885  C7   BES B   1      12.300  42.727  65.283  1.00 19.51
ATOM   4886  C8   BES B   1      11.297  43.571  64.799  1.00 18.42
ATOM   4887  C12  BES B   1      11.934  41.717  66.170  1.00 19.27
ATOM   4888  C9   BES B   1       9.990  43.454  65.227  1.00 16.90
ATOM   4889  C11  BES B   1      10.614  41.580  66.600  1.00 19.17
ATOM   4890  C10  BES B   1       9.639  42.451  66.135  1.00 18.42
ATOM   4891  C2   BES B   1      15.881  42.065  63.795  1.00 21.80
ATOM   4892  O2   BES B   1      16.369  41.004  62.999  1.00 18.60
ATOM   4893  C3   BES B   1      16.741  42.156  65.063  1.00 23.33
ATOM   4894  O3   BES B   1      16.932  41.185  65.803  1.00 25.68
ATOM   4895  N1   BES B   1      17.280  43.376  65.250  1.00 21.90
ATOM   4896  C4   BES B   1      18.157  43.613  66.390  1.00 24.18
ATOM   4897  C13  BES B   1      19.568  43.595  65.855  1.00 22.49
ATOM   4898  C14  BES B   1      20.669  42.812  66.576  1.00 24.23
ATOM   4899  C15  BES B   1      20.210  41.770  67.577  1.00 23.32
ATOM   4900  C16  BES B   1      21.692  42.287  65.590  1.00 22.52
ATOM   4901  C5   BES B   1      17.840  45.000  67.053  1.00 25.70
ATOM   4902  O1   BES B   1      17.160  45.848  66.348  1.00 22.63
ATOM   4903  O4   BES B   1      18.206  45.226  68.192  1.00 26.52
ATOM   4904  CG   IMD I   1      26.142  42.633  80.576  1.00 14.44
ATOM   4905  ND1  IMD I   1      25.962  42.811  79.218  1.00 15.15
ATOM   4906  CD2  IMD I   1      27.444  42.291  80.744  1.00 13.81
ATOM   4907  CE1  IMD I   1      27.096  42.555  78.588  1.00  9.17
ATOM   4908  NE2  IMD I   1      28.014  42.249  79.494  1.00 21.14
ATOM   4909  CB   ACE C   1      13.753  12.531  68.686  1.00 39.29
ATOM   4910  CG   ACE C   1      13.041  13.755  69.176  1.00 52.31
ATOM   4911  OD1  ACE C   1      13.310  14.951  68.885  1.00 21.34
ATOM   4912  OD2  ACE C   1      12.075  13.324  69.958  1.00 27.10
ATOM   4913  O    HOH W   1      23.792  34.258  75.188  1.00 13.41
ATOM   4914  O    HOH W   2      41.402  41.645  77.736  1.00 18.41
ATOM   4915  O    HOH W   3      21.452  48.008  79.289  1.00 14.29
ATOM   4916  O    HOH W   4       7.395  22.508  68.980  1.00 15.42
ATOM   4917  O    HOH W   5       8.875  45.610  71.521  1.00 15.01
ATOM   4918  O    HOH W   6      18.318  15.775  81.560  1.00 42.99
ATOM   4919  O    HOH W   7      30.607  45.406  73.230  1.00 16.49
ATOM   4920  O    HOH W   8       2.151  35.326  56.132  1.00 20.69
ATOM   4921  O    HOH W   9      26.371  45.237  72.729  1.00 32.21
ATOM   4922  O    HOH W  10      10.117  47.411  58.465  1.00 19.66
ATOM   4923  O    HOH W  11      24.576  45.901  81.764  1.00 15.98
ATOM   4924  O    HOH W  12      21.400  39.522  70.350  1.00 17.59
ATOM   4925  O    HOH W  13      32.755  39.688  76.763  1.00 14.73
ATOM   4926  O    HOH W  14      15.723  43.292  73.593  1.00 28.15
ATOM   4927  O    HOH W  15      33.012  53.990  68.029  1.00 20.61
ATOM   4928  O    HOH W  16      21.672  48.368  86.318  1.00 18.35
ATOM   4929  O    HOH W  17      11.843  66.293  86.775  1.00 20.28
ATOM   4930  O    HOH W  18      -7.370  39.258  72.858  1.00100.00
ATOM   4931  O    HOH W  19      10.951  58.853  90.712  1.00 31.18
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ATOM   4932  O   HOH W  20       7.991  67.991  69.688  1.00 51.29
ATOM   4933  O   HOH W  21      27.534  25.933  83.686  1.00 30.42
ATOM   4934  O   HOH W  22      14.754  47.886  81.192  1.00 91.59
ATOM   4935  O   HOH W  23      35.638  66.681  74.616  1.00 18.43
ATOM   4936  O   HOH W  24      14.917  46.651  71.292  1.00 29.09
ATOM   4937  O   HOH W  25      24.339  72.545  82.858  1.00 27.38
ATOM   4938  O   HOH W  26       3.954  59.653  64.218  1.00 29.75
ATOM   4939  O   HOH W  27       0.174  30.326  72.099  1.00 20.53
ATOM   4940  O   HOH W  28      17.250  55.520  87.251  1.00 15.14
ATOM   4941  O   HOH W  29       2.640  38.007  61.525  1.00 15.01
ATOM   4942  O   HOH W  30      10.861  36.115  89.266  1.00 26.76
ATOM   4943  O   HOH W  31      30.988  44.243  70.800  1.00 37.98
ATOM   4944  O   HOH W  32       9.095  44.675  75.314  1.00 24.97
ATOM   4945  O   HOH W  33      29.917  47.569  70.312  1.00 33.43
ATOM   4946  O   HOH W  34      23.537  45.186  73.070  1.00 21.89
ATOM   4947  O   HOH W  35      13.919  30.086  87.520  1.00 27.60
ATOM   4948  O   HOH W  36      24.004  28.230  84.950  1.00 54.91
ATOM   4949  O   HOH W  37      44.740  56.907  93.797  1.00 39.70
ATOM   4950  O   HOH W  38      36.453  36.919  75.700  1.00 12.06
ATOM   4951  O   HOH W  39      27.587  65.302  75.920  1.00 21.02
ATOM   4952  O   HOH W  40      23.077  39.811  87.155  1.00 38.48
ATOM   4953  O   HOH W  41       3.661  37.055  59.039  1.00 17.86
ATOM   4954  O   HOH W  42      21.794  20.673  79.219  1.00 20.60
ATOM   4955  O   HOH W  43       6.324  36.055  87.167  1.00 30.35
ATOM   4956  O   HOH W  44      24.649  34.194  44.975  1.00 52.51
ATOM   4957  O   HOH W  45      20.611  44.717  78.685  1.00 27.41
ATOM   4958  O   HOH W  46      19.969  50.884  89.461  1.00 29.62
ATOM   4959  O   HOH W  47      30.940  66.808  78.811  1.00 15.76
ATOM   4960  O   HOH W  48      26.539  55.260  66.886  1.00 19.97
ATOM   4961  O   HOH W  49       7.314  45.436  77.867  1.00 35.07
ATOM   4962  O   HOH W  50      10.579  54.800  67.603  1.00 15.62
ATOM   4963  O   HOH W  51      28.138  31.371  66.611  1.00 15.08
ATOM   4964  O   HOH W  52      26.292  33.348  75.129  1.00 15.49
ATOM   4965  O   HOH W  53      15.204  48.508  69.331  1.00 16.03
ATOM   4966  O   HOH W  54       9.451  57.282  68.158  1.00 20.39
ATOM   4967  O   HOH W  55      34.923  67.738  77.001  1.00 15.06
ATOM   4968  O   HOH W  56      10.193  53.763  78.443  1.00 19.23
ATOM   4969  O   HOH W  57      35.246  32.562  64.227  1.00 27.89
ATOM   4970  O   HOH W  58       7.230  48.517  65.509  1.00 17.57
ATOM   4971  O   HOH W  59      15.707  29.269  62.146  1.00 16.76
ATOM   4972  O   HOH W  60      22.703  46.209  83.610  1.00 14.72
ATOM   4973  O   HOH W  61      -5.573  31.742  67.048  1.00 67.53
ATOM   4974  O   HOH W  62      23.958  46.448  79.118  1.00 14.95
ATOM   4975  O   HOH W  63      -4.387  51.289  59.224  1.00 29.13
ATOM   4976  O   HOH W  64       1.494  43.916  68.255  1.00 21.32
ATOM   4977  O   HOH W  65      15.236  37.185  89.202  1.00 24.71
ATOM   4978  O   HOH W  66       8.901  44.256  58.842  1.00 22.41
ATOM   4979  O   HOH W  67       8.741  44.059  69.410  1.00 19.23
ATOM   4980  O   HOH W  68      10.536  31.361  71.130  1.00 17.26
ATOM   4981  O   HOH W  69      14.270  66.977  85.494  1.00 24.71
ATOM   4982  O   HOH W  70      19.324  33.013  51.120  1.00 31.37
ATOM   4983  O   HOH W  71      22.888  42.589  71.900  1.00 32.53
ATOM   4984  O   HOH W  72      18.199  19.792  50.850  1.00 95.99
ATOM   4985  O   HOH W  73      -2.766  36.708  53.654  1.00 25.61
ATOM   4986  O   HOH W  74      40.154  44.352  89.098  1.00 18.04
ATOM   4987  O   HOH W  75      43.798  45.414  76.216  1.00 42.09
ATOM   4988  O   HOH W  76       2.095  33.636  67.241  1.00 16.77
ATOM   4989  O   HOH W  77      17.697  47.834  68.674  1.00 15.55
ATOM   4990  O   HOH W  78       0.487  49.526  68.994  1.00 40.71
ATOM   4991  O   HOH W  79      24.958  57.027  93.315  1.00 15.83
ATOM   4992  O   HOH W  80      16.157  27.572  83.036  1.00 20.90
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ATOM 4993 O HOH W 81 5.222 49.330 63.415 1.00 17.36
ATOM 4994 O HOH W 82 16.211 37.941 52.836 1.00 19.88
ATOM 4995 O HOH W 83 32.789 43.179 86.654 1.00 20.34
ATOM 4996 O HOH W 84 9.298 48.075 81.153 1.00 54.83
ATOM 4997 O HOH W 85 29.454 36.152 82.527 1.00 29.31
ATOM 4998 O HOH W 86 41.926 50.859 91.024 1.00 26.91
ATOM 4999 O HOH W 87 42.353 47.486 84.905 1.00 21.77
ATOM 5000 O HOH W 88 7.099 45.738 66.261 1.00 16.80
ATOM 5001 O HOH W 89 -7.189 40.950 62.864 1.00 18.87
ATOM 5002 O HOH W 90 -0.532 35.957 55.006 1.00 30.96
ATOM 5003 O HOH W 91 2.498 58.239 62.223 1.00 33.64
ATOM 5004 O HOH W 92 8.030 54.347 85.172 1.00 36.67
ATOM 5005 O HOH W 93 -9.086 47.257 64.010 1.00 25.14
ATOM 5006 O HOH W 94 7.634 23.157 71.565 1.00 26.48
ATOM 5007 O HOH W 95 36.802 57.687 75.942 1.00 33.51
ATOM 5008 O HOH W 96 31.266 28.847 81.561 1.00 33.78
ATOM 5009 O HOH W 97 42.718 53.265 90.455 1.00 18.15
ATOM 5010 O HOH W 98 25.175 49.362 94.064 1.00 38.55
ATOM 5011 O HOH W 99 -1.458 36.897 71.377 1.00 21.47
ATOM 5012 O HOH W 100 36.955 22.462 67.101 1.00 62.30
ATOM 5013 O HOH W 101 17.777 47.785 75.841 1.00 20.17
ATOM 5014 O HOH W 102 17.194 41.841 54.112 1.00 16.39
ATOM 5015 O HOH W 103 -1.972 55.370 57.254 1.00 25.11
ATOM 5016 O HOH W 104 27.602 40.677 72.586 1.00 21.30
ATOM 5017 O HOH W 105 37.435 51.467 61.104 1.00 65.38
ATOM 5018 O HOH W 106 1.256 32.447 69.628 1.00 23.44
ATOM 5019 O HOH W 107 9.241 16.192 63.327 1.00 48.00
ATOM 5020 O HOH W 108 0.854 36.054 64.035 1.00 18.60
ATOM 5021 O HOH W 109 18.727 44.131 84.651 1.00 24.89
ATOM 5022 O HOH W 110 26.098 18.961 78.803 1.00 24.48
ATOM 5023 O HOH W 111 19.158 42.699 78.273 1.00 28.07
ATOM 5024 O HOH W 112 38.525 39.961 90.164 1.00 49.63
ATOM 5025 O HOH W 113 18.603 45.487 82.264 1.00 21.64
ATOM 5026 O HOH W 114 -9.935 47.106 60.568 1.00 27.24
ATOM 5027 O HOH W 115 12.837 36.710 59.433 1.00 15.13
ATOM 5028 O HOH W 116 33.438 65.032 85.997 1.00 32.21
ATOM 5029 O HOH W 117 38.122 36.535 73.494 1.00 12.50
ATOM 5030 O HOH W 118 39.258 66.537 78.047 1.00 18.65
ATOM 5031 O HOH W 119 6.554 34.671 88.987 1.00 15.86
ATOM 5032 O HOH W 120 13.095 46.874 73.346 1.00 30.35
ATOM 5033 O HOH W 121 32.660 36.335 82.732 1.00 35.47
ATOM 5034 O HOH W 122 9.605 28.610 88.505 1.00 19.15
ATOM 5035 O HOH W 123 27.330 46.500 69.982 1.00 28.22
ATOM 5036 O HOH W 124 21.495 44.397 85.333 1.00 27.70
ATOM 5037 O HOH W 125 25.964 67.884 90.313 1.00 24.59
ATOM 5038 O HOH W 126 39.654 61.279 78.612 1.00 34.08
ATOM 5039 O HOH W 127 28.830 50.839 62.528 1.00 22.84
ATOM 5040 O HOH W 128 -2.192 25.904 60.928 1.00 48.99
ATOM 5041 O HOH W 129 12.941 37.733 62.998 1.00 17.09
ATOM 5042 O HOH W 130 17.656 39.494 55.302 1.00 23.77
ATOM 5043 O HOH W 131 5.616 31.767 78.251 1.00 22.11
ATOM 5044 O HOH W 132 11.134 59.317 68.286 1.00 24.37
ATOM 5045 O HOH W 133 7.669 46.689 57.186 1.00 19.15
ATOM 5046 O HOH W 134 24.475 34.718 86.839 1.00 32.19
ATOM 5047 O HOH W 135 23.517 44.933 68.463 1.00 20.25
ATOM 5048 O HOH W 136 26.942 39.752 68.390 1.00 15.96
ATOM 5049 O HOH W 137 8.029 20.133 84.468 1.00 16.28
ATOM 5050 O HOH W 138 -0.771 45.529 78.260 1.00 68.55
ATOM 5051 O HOH W 139 44.023 49.889 77.980 1.00 30.04
ATOM 5052 O HOH W 140 26.786 62.061 81.604 1.00 16.85
ATOM 5053 O HOH W 141 13.879 47.676 76.209 1.00 46.91

ATOM	5054	O	HOH W 142	25.840	58.036	65.771	1.00	54.37
ATOM	5055	O	HOH W 143	10.922	53.966	85.792	1.00	18.98
ATOM	5056	O	HOH W 144	-12.182	45.374	45.449	1.00	33.96
ATOM	5057	O	HOH W 145	31.206	39.579	79.369	1.00	15.60
ATOM	5058	O	HOH W 146	15.440	42.222	77.590	1.00	25.43
ATOM	5059	O	HOH W 147	0.824	56.052	62.386	1.00	26.41
ATOM	5060	O	HOH W 148	44.978	53.578	86.262	1.00	22.60
ATOM	5061	O	HOH W 149	17.898	31.967	86.834	1.00	19.51
ATOM	5062	O	HOH W 150	15.892	63.944	61.374	1.00	54.27
ATOM	5063	O	HOH W 151	29.311	44.330	75.316	1.00	39.02
ATOM	5064	O	HOH W 152	11.678	62.566	52.561	1.00	27.61
ATOM	5065	O	HOH W 153	26.748	53.479	95.785	1.00	45.53
ATOM	5066	O	HOH W 154	35.164	39.157	88.454	1.00	33.28
ATOM	5067	O	HOH W 155	13.599	30.411	61.539	1.00	16.55
ATOM	5068	O	HOH W 156	2.955	41.496	60.167	1.00	26.41
ATOM	5069	O	HOH W 157	21.013	47.058	81.902	1.00	24.07
ATOM	5070	O	HOH W 158	7.082	15.804	68.963	1.00	13.64
ATOM	5071	O	HOH W 159	43.659	51.565	97.228	1.00	13.91
ATOM	5072	O	HOH W 160	25.728	46.521	67.857	1.00	15.18
ATOM	5073	O	HOH W 161	16.336	27.429	80.519	1.00	13.58
ATOM	5074	O	HOH W 162	13.506	27.963	78.488	1.00	11.63
ATOM	5075	O	HOH W 163	-1.826	28.836	60.633	1.00	18.21
ATOM	5076	O	HOH W 164	2.041	28.523	68.718	1.00	19.80
ATOM	5077	O	HOH W 165	39.832	50.082	92.567	1.00	15.76
ATOM	5078	O	HOH W 166	20.417	35.797	44.686	1.00	23.98
ATOM	5079	O	HOH W 167	36.272	60.259	74.993	1.00	26.08
ATOM	5080	O	HOH W 168	5.426	61.205	63.338	1.00	23.06
ATOM	5081	O	HOH W 169	17.667	67.608	77.116	1.00	28.66
ATOM	5082	O	HOH W 170	5.631	18.160	69.508	1.00	19.48
ATOM	5083	O	HOH W 171	22.328	62.979	93.415	1.00	25.81
ATOM	5084	O	HOH W 172	40.390	48.175	94.855	1.00	47.37
ATOM	5085	O	HOH W 173	17.444	40.095	51.789	1.00	18.19
ATOM	5086	O	HOH W 174	29.587	24.011	76.681	1.00	24.09
ATOM	5087	O	HOH W 175	6.778	26.010	80.637	1.00	26.64
ATOM	5088	O	HOH W 176	43.821	42.250	81.895	1.00	24.88
ATOM	5089	O	HOH W 177	28.198	18.300	60.474	1.00	24.14
ATOM	5090	O	HOH W 178	22.788	46.771	90.209	1.00	24.26
ATOM	5091	O	HOH W 179	29.931	24.564	79.534	1.00	31.74
ATOM	5092	O	HOH W 180	10.739	18.587	70.209	1.00	34.82
ATOM	5093	O	HOH W 181	3.737	42.980	66.727	1.00	18.45
ATOM	5094	O	HOH W 182	10.657	69.135	86.850	1.00	30.21
ATOM	5095	O	HOH W 183	23.612	39.959	68.861	1.00	20.99
ATOM	5096	O	HOH W 184	30.240	50.378	93.511	1.00	31.76
ATOM	5097	O	HOH W 185	24.407	42.363	69.680	1.00	23.63
ATOM	5098	O	HOH W 186	3.121	26.698	57.992	1.00	26.26
ATOM	5099	O	HOH W 187	6.662	51.993	60.872	1.00	21.24
ATOM	5100	O	HOH W 188	10.549	31.727	52.631	1.00	21.12
ATOM	5101	O	HOH W 189	7.213	14.560	66.229	1.00	19.68
ATOM	5102	O	HOH W 190	10.944	37.995	74.849	1.00	26.21
ATOM	5103	O	HOH W 191	29.009	38.268	80.361	1.00	21.40
ATOM	5104	O	HOH W 192	8.720	37.803	87.790	1.00	25.70
ATOM	5105	O	HOH W 193	30.731	47.721	57.132	1.00	25.12
ATOM	5106	O	HOH W 194	21.085	45.693	69.052	1.00	27.11
ATOM	5107	O	HOH W 195	37.609	50.318	68.349	1.00	33.12
ATOM	5108	O	HOH W 196	-4.270	35.004	72.084	1.00	23.92
ATOM	5109	O	HOH W 197	38.619	67.647	73.848	1.00	28.81
ATOM	5110	O	HOH W 198	0.963	27.263	54.964	1.00	25.61
ATOM	5111	O	HOH W 199	32.881	53.350	97.969	1.00	72.92
ATOM	5112	O	HOH W 200	16.605	54.411	65.120	1.00	21.12
ATOM	5113	O	HOH W 201	19.780	53.463	90.814	1.00	25.04
ATOM	5114	O	HOH W 202	-7.941	56.718	56.011	1.00	40.98

ATOM 5115 O HOH W 203 8.373 35.496 71.320 1.00 34.46
ATOM 5116 O HOH W 204 30.102 60.104 96.117 1.00 23.15
ATOM 5117 O HOH W 205 28.927 39.455 66.453 1.00 21.12
ATOM 5118 O HOH W 206 39.689 41.335 88.297 1.00 27.24
ATOM 5119 O HOH W 207 33.916 37.626 52.438 1.00 33.19
ATOM 5120 O HOH W 208 1.622 50.963 82.588 1.00 50.35
ATOM 5121 O HOH W 209 16.333 60.146 56.900 1.00 29.60
ATOM 5122 O HOH W 210 39.242 45.128 91.725 1.00 22.90
ATOM 5123 O HOH W 211 14.399 30.418 45.430 1.00 34.78
ATOM 5124 O HOH W 212 29.888 42.111 88.891 1.00 34.76
ATOM 5125 O HOH W 213 18.346 26.212 50.297 1.00 44.21
ATOM 5126 O HOH W 214 22.864 63.026 74.711 1.00 29.30
ATOM 5127 O HOH W 215 20.113 37.220 85.926 1.00 24.06
ATOM 5128 O HOH W 216 23.298 70.540 87.208 1.00 35.89
ATOM 5129 O HOH W 217 26.970 41.872 69.933 1.00 28.60
ATOM 5130 O HOH W 218 -4.296 44.927 43.216 1.00 33.90
ATOM 5131 O HOH W 219 12.321 60.082 62.828 1.00 28.33
ATOM 5132 O HOH W 220 13.873 37.878 45.419 1.00 43.55
ATOM 5133 O HOH W 221 30.748 40.180 83.791 1.00 37.04
ATOM 5134 O HOH W 222 15.784 58.732 93.087 1.00 23.80
ATOM 5135 O HOH W 223 35.311 18.767 63.462 1.00 49.24
ATOM 5136 O HOH W 224 -0.325 33.536 77.400 1.00 28.59
ATOM 5137 O HOH W 225 9.312 60.280 65.861 1.00 37.85
ATOM 5138 O HOH W 226 20.424 20.146 83.661 1.00 32.68
ATOM 5139 O HOH W 227 10.879 65.256 88.761 1.00 28.17
ATOM 5140 O HOH W 228 6.481 11.890 66.154 1.00 13.58
ATOM 5141 O HOH W 229 11.493 12.304 65.667 1.00 31.38
ATOM 5142 O HOH W 230 23.893 48.760 67.764 1.00 19.58
ATOM 5143 O HOH W 231 11.826 33.465 74.498 1.00 16.87
ATOM 5144 O HOH W 232 20.228 48.799 84.083 1.00 14.10
ATOM 5145 O HOH W 233 8.333 25.989 83.238 1.00 20.03
ATOM 5146 O HOH W 234 24.244 65.422 90.512 1.00 18.61
ATOM 5147 O HOH W 235 29.682 43.395 86.674 1.00 29.99
ATOM 5148 O HOH W 236 32.122 38.935 81.421 1.00 21.98
ATOM 5149 O HOH W 237 38.098 44.260 70.626 1.00 23.18
ATOM 5150 O HOH W 238 17.172 68.773 81.829 1.00 33.19
ATOM 5151 O HOH W 239 22.056 41.676 85.707 1.00 27.98
ATOM 5152 O HOH W 240 10.609 35.835 76.035 1.00 26.77
ATOM 5153 O HOH W 241 5.895 48.362 80.563 1.00 35.27
ATOM 5154 O HOH W 242 4.210 38.365 90.354 1.00 62.63
ATOM 5155 O HOH W 243 27.505 26.048 57.570 1.00 34.59
ATOM 5156 O HOH W 244 40.199 29.895 75.610 1.00 30.81
ATOM 5157 O HOH W 245 41.069 35.070 67.073 1.00 25.75
ATOM 5158 O HOH W 246 18.209 43.386 70.174 1.00 24.27
ATOM 5159 O HOH W 247 22.994 40.780 73.297 1.00 35.20
ATOM 5160 O HOH W 248 11.980 17.646 61.687 1.00 24.63
ATOM 5161 O HOH W 249 17.092 44.230 71.974 1.00 27.55
ATOM 5162 O HOH W 250 29.907 45.909 50.610 1.00 33.85
ATOM 5163 O HOH W 251 25.337 41.587 74.020 1.00 31.92
ATOM 5164 O HOH W 252 34.320 29.393 64.417 1.00 34.88
ATOM 5165 O HOH W 253 16.366 57.688 55.311 1.00 30.35
ATOM 5166 O HOH W 254 25.295 70.347 83.432 1.00 44.62
ATOM 5167 O HOH W 255 28.780 44.083 69.312 1.00 38.06
ATOM 5168 O HOH W 256 43.987 44.841 81.855 1.00 26.92
ATOM 5169 O HOH W 257 10.694 22.780 82.399 1.00 40.18
ATOM 5170 O HOH W 258 3.209 26.059 69.842 1.00 50.02
ATOM 5171 O HOH W 259 25.123 69.880 90.995 1.00 32.08
ATOM 5172 O HOH W 260 10.460 60.937 72.334 1.00 28.48
ATOM 5173 O HOH W 261 35.272 43.014 54.933 1.00 35.32
ATOM 5174 O HOH W 262 31.555 49.428 69.261 1.00 30.03
ATOM 5175 O HOH W 263 18.455 45.339 74.865 1.00 22.60

ATOM	5176	O	HOH W 264	0.397	52.925	76.187	1.00	26.73
ATOM	5177	O	HOH W 265	24.642	68.564	81.573	1.00	27.40
ATOM	5178	O	HOH W 266	25.734	20.393	55.492	1.00	32.87
ATOM	5179	O	HOH W 267	11.923	58.720	70.763	1.00	21.77
ATOM	5180	O	HOH W 268	30.308	43.013	67.201	1.00	35.32
ATOM	5181	O	HOH W 269	39.640	38.126	67.437	1.00	28.94
ATOM	5182	O	HOH W 270	10.397	50.110	41.557	1.00	28.07
ATOM	5183	O	HOH W 271	33.290	46.466	61.539	1.00	27.30
ATOM	5184	O	HOH W 272	0.016	42.090	76.502	1.00	32.33
ATOM	5185	O	HOH W 273	26.563	45.481	40.291	1.00	47.85
ATOM	5186	O	HOH W 274	30.451	15.205	70.110	1.00	33.04
ATOM	5187	O	HOH W 275	0.678	54.618	69.973	1.00	30.37
ATOM	5188	O	HOH W 276	31.009	22.826	58.292	1.00	38.03
ATOM	5189	O	HOH W 277	11.598	18.077	78.103	1.00	32.86
ATOM	5190	O	HOH W 278	42.789	49.257	82.276	1.00	38.27
ATOM	5191	O	HOH W 279	22.610	37.483	44.945	1.00	36.88
ATOM	5192	O	HOH W 280	19.095	19.104	54.480	1.00	29.52
ATOM	5193	O	HOH W 281	-17.217	39.695	36.067	1.00	33.38
ATOM	5194	O	HOH W 282	6.068	42.637	67.543	1.00	33.87
ATOM	5195	O	HOH W 283	20.639	46.522	87.847	1.00	36.70
ATOM	5196	O	HOH W 284	-8.870	56.242	58.240	1.00	50.62
ATOM	5197	O	HOH W 285	16.582	61.670	59.151	1.00	38.20
ATOM	5198	O	HOH W 286	42.501	43.301	75.886	1.00	27.81
ATOM	5199	O	HOH W 287	25.604	33.439	84.786	1.00	21.08
ATOM	5200	O	HOH W 288	13.520	67.352	52.561	1.00	39.75
ATOM	5201	O	HOH W 289	9.627	28.198	45.908	1.00	37.35
ATOM	5202	O	HOH W 290	18.134	36.512	88.493	1.00	43.01
ATOM	5203	O	HOH W 291	22.300	20.482	81.874	1.00	37.81
ATOM	5204	O	HOH W 292	44.203	41.289	79.602	1.00	27.00
ATOM	5205	O	HOH W 293	44.462	52.335	93.395	1.00	32.88
ATOM	5206	O	HOH W 294	-2.968	37.813	43.815	1.00	39.42
ATOM	5207	O	HOH W 295	14.615	50.638	83.483	1.00	40.84
ATOM	5208	O	HOH W 296	17.655	48.236	85.049	1.00	38.41
ATOM	5209	O	HOH W 297	25.105	58.534	70.338	1.00	45.37
ATOM	5210	O	HOH W 298	6.153	22.174	58.465	1.00	51.17
ATOM	5211	O	HOH W 299	14.099	45.045	75.129	1.00	38.12
ATOM	5212	O	HOH W 300	3.614	33.798	78.265	1.00	33.77
ATOM	5213	O	HOH W 301	10.974	62.101	70.086	1.00	31.30
ATOM	5214	O	HOH W 302	7.585	38.532	71.479	1.00	35.66
ATOM	5215	O	HOH W 303	20.998	44.178	74.359	1.00	37.38
ATOM	5216	O	HOH W 304	11.918	38.385	43.252	1.00	35.61
ATOM	5217	O	HOH W 305	34.337	29.948	80.309	1.00	36.78
ATOM	5218	O	HOH W 306	39.120	63.630	75.316	1.00	43.48
ATOM	5219	O	HOH W 307	36.491	64.702	80.717	1.00	19.64
ATOM	5220	O	HOH W 308	-11.598	58.968	55.040	1.00	54.59
ATOM	5221	O	HOH W 309	18.873	53.508	93.447	1.00	29.42
ATOM	5222	O	HOH W 310	7.673	37.412	69.273	1.00	30.92
ATOM	5223	O	HOH W 311	38.494	29.355	71.433	1.00	35.92
ATOM	5224	O	HOH W 312	2.378	64.614	72.106	1.00	23.68
ATOM	5225	O	HOH W 313	34.055	22.747	70.419	1.00	47.42
ATOM	5226	O	HOH W 314	6.517	15.338	63.891	1.00	39.21
ATOM	5227	O	HOH W 315	33.135	58.667	95.357	1.00	38.27
ATOM	5228	O	HOH W 316	7.877	41.088	68.810	1.00	30.88
ATOM	5229	O	HOH W 317	4.500	63.686	62.465	1.00	40.54
ATOM	5230	O	HOH W 318	32.594	44.212	51.619	1.00	28.18
ATOM	5231	O	HOH W 319	19.892	28.363	50.295	1.00	37.48
ATOM	5232	O	HOH W 320	38.121	42.209	58.482	1.00	35.42
ATOM	5233	O	HOH W 321	18.953	60.209	59.879	1.00	32.37
ATOM	5234	O	HOH W 322	-1.038	45.854	73.695	1.00	33.19
ATOM	5235	O	HOH W 323	-6.723	31.695	78.229	1.00	48.52
ATOM	5236	O	HOH W 324	20.123	41.413	71.190	1.00	40.23

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ATOM   5237  O   HOH W 325       5.380  25.588  55.751  1.00 26.30
ATOM   5238  O   HOH W 326      -8.946  53.154  58.636  1.00 33.33
ATOM   5239  O   HOH W 327       5.224  20.615  65.617  1.00 38.04
ATOM   5240  O   HOH W 328      -0.951  44.688  66.660  1.00 48.71
ATOM   5241  O   HOH W 329       9.548  17.972  61.116  1.00 38.57
ATOM   5242  O   HOH W 330      16.170  45.478  46.564  1.00 33.55
ATOM   5243  O   HOH W 331      28.152  31.228  86.919  1.00 66.11
ATOM   5244  O   HOH W 332      -4.227  32.608  61.396  1.00 29.03
ATOM   5245  O   HOH W 333      23.532  69.913  79.399  1.00 40.45
ATOM   5246  O   HOH W 334      16.943  25.394  84.026  1.00 35.64
ATOM   5247  O   HOH W 335      -6.097  33.164  72.143  1.00 47.23
ATOM   5248  O   HOH W 336      26.639  58.545  95.902  1.00 30.17
ATOM   5249  O   HOH W 337      18.090  14.281  77.183  1.00 34.77
ATOM   5250  O   HOH W 338      16.783  69.158  79.498  1.00 41.04
ATOM   5251  O   HOH W 339      44.586  50.422  83.945  1.00 37.92
ATOM   5252  O   HOH W 340      11.828  51.361  43.560  1.00 42.10
ATOM   5253  O   HOH W 341      22.773  36.745  86.817  1.00 38.07
ATOM   5254  O   HOH W 342      26.608  43.969  74.943  1.00 32.64
ATOM   5255  O   HOH W 343      14.797  17.437  79.901  1.00 37.80
ATOM   5256  O   HOH W 344      32.755  40.414  86.886  1.00 53.20
ATOM   5257  O   HOH W 345      23.938  65.851  93.231  1.00 38.25
ATOM   5258  O   HOH W 346      34.689  68.947  70.635  1.00 32.36
ATOM   5259  O   HOH W 347      32.902  14.779  66.467  1.00 55.05
ATOM   5260  O   HOH W 348      -0.197  59.892  61.918  1.00 41.09
ATOM   5261  O   HOH W 349      35.933  50.743  66.825  1.00 29.14
ATOM   5262  O   HOH W 350      21.451  70.196  84.069  1.00 37.63
ATOM   5263  O   HOH W 351      10.392  34.055  71.909  1.00 37.36
ATOM   5264  O   HOH W 352      16.118  48.288  46.594  1.00 33.56
ATOM   5265  O   HOH W 353       2.277  58.481  67.819  1.00 45.09
ATOM   5266  O   HOH W 354     -21.140  42.970  52.987  1.00 38.49
ATOM   5267  O   HOH W 355       0.364  56.797  65.209  1.00 34.76
ATOM   5268  O   HOH W 356       9.763  37.511  72.464  1.00 36.84
ATOM   5269  O   HOH W 357      -3.293  29.651  64.159  1.00 48.44
ATOM   5270  O   HOH W 358      18.653  59.497  55.820  1.00 41.32
ATOM   5271  O   HOH W 359      18.360  56.858  89.365  1.00 16.20
ATOM   5272  O   HOH W 360      19.264  58.334  58.324  1.00 24.32
ATOM   5273  O   HOH W 361      19.786  68.920  85.535  1.00 36.46
ATOM   5274  O   HOH W 362       0.891  46.454  70.028  1.00 49.40
ATOM   5275  O   HOH W 363      13.401  15.156  61.247  1.00 32.90
ATOM   5276  O   HOH W 364      29.937  41.912  73.484  1.00 34.92
ATOM   5277  O   HOH W 365      28.117  39.053  82.612  1.00 29.94
ATOM   5278  O   HOH W 366      17.060  44.064  76.687  1.00 31.64
ATOM   5279  O   HOH W 367       7.781  32.331  42.244  1.00 54.33
ATOM   5280  O   HOH W 368      13.484  60.143  67.092  1.00 36.32
ATOM   5281  O   HOH W 369       4.972  65.695  69.472  1.00 30.93
ATOM   5282  O   HOH W 370      20.859  55.364  94.926  1.00 35.05
ATOM   5283  O   HOH W 371      29.891  64.316  94.062  1.00 32.43
ATOM   5284  O   HOH W 372      31.636  50.857  46.407  1.00 75.60
ATOM   5285  O   HOH W 373      -9.778  35.027  39.632  1.00 56.74
ATOM   5286  O   HOH W 374      14.152  12.701  64.957  1.00 23.80
ATOM   5287  O   HOH W 375      35.419  45.143  64.442  1.00 36.74
ATOM   5288  O   HOH W 376      34.839  57.375  97.888  1.00 34.34
ATOM   5289  O   HOH W 377      35.027  44.946  53.379  1.00 45.25
ATOM   5290  O   HOH W 378      10.904  44.942  78.238  1.00 46.33
ATOM   5291  O   HOH W 379       2.265  29.749  79.673  1.00 55.34
ATOM   5292  O   HOH W 380      38.376  37.663  83.485  1.00 48.83
ATOM   5293  O   HOH W 381       7.069  18.511  64.588  1.00 42.75
ATOM   5294  O   HOH W 382      10.013  63.184  65.119  1.00 51.27
ATOM   5295  O   HOH W 383      26.880  67.265  80.460  1.00 29.17
ATOM   5296  O   HOH W 384       5.435  44.858  39.529  1.00 44.09
ATOM   5297  O   HOH W 385      12.020  76.116  49.503  1.00 57.08
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ATOM   5298  O   HOH W 386       4.495  69.223  72.134  1.00 39.49
ATOM   5299  O   HOH W 387      34.373  34.834  52.407  1.00 45.73
ATOM   5300  O   HOH W 388      -0.366  52.210  68.045  1.00 56.86
ATOM   5301  O   HOH W 389      15.108  39.899  89.165  1.00 30.62
ATOM   5302  O   HOH W 390      20.977  60.725  61.985  1.00 42.08
ATOM   5303  O   HOH W 391      29.038  14.547  63.725  1.00 33.69
ATOM   5304  O   HOH W 392      34.064  66.637  81.988  1.00 37.83
ATOM   5305  O   HOH W 393       8.669  71.915  54.348  1.00 40.01
ATOM   5306  O   HOH W 394       4.823  29.577  79.259  1.00 42.09
ATOM   5307  O   HOH W 395      22.745  32.929  42.078  1.00 50.18
ATOM   5308  O   HOH W 396       0.658  29.749  51.236  1.00 30.86
ATOM   5309  O   HOH W 397       3.793  58.214  86.346  1.00 62.42
ATOM   5310  O   HOH W 398      12.206  40.564  89.850  1.00 39.66
ATOM   5311  O   HOH W 399      21.573  25.561  53.053  1.00 34.62
ATOM   5312  O   HOH W 400      30.197  56.551  58.739  1.00 40.16
ATOM   5313  O   HOH W 401      20.406  59.350  64.941  1.00 33.97
ATOM   5314  O   HOH W 402      16.956  52.960  87.724  1.00 54.35
ATOM   5315  O   HOH W 403      36.719  27.459  68.822  1.00 42.51
ATOM   5316  O   HOH W 404       7.458  27.206  77.481  1.00 46.67
ATOM   5317  O   HOH W 405      36.220  64.298  90.593  1.00 51.29
ATOM   5318  O   HOH W 406     -17.985  43.406  48.900  1.00 41.71
ATOM   5319  O   HOH W 407       1.914  29.246  53.120  1.00 38.28
ATOM   5320  O   HOH W 408      -4.267  29.328  73.970  1.00 34.50
ATOM   5321  O   HOH W 409      14.000  53.360  42.218  1.00 42.56
ATOM   5322  O   HOH W 410       5.615  22.345  61.668  1.00 59.03
ATOM   5323  O   HOH W 411      -3.455  50.442  63.951  1.00 44.90
ATOM   5324  O   HOH W 412      29.002  38.811  44.563  1.00 43.27
ATOM   5325  O   HOH W 413      37.416  55.208  61.603  1.00 42.90
ATOM   5326  O   HOH W 414      14.459  14.960  73.514  1.00 42.33
ATOM   5327  O   HOH W 415      35.076  48.768  98.233  1.00 41.69
ATOM   5328  O   HOH W 416       6.452  56.342  86.263  1.00 34.79
ATOM   5329  O   HOH W 417      35.573  17.694  66.735  1.00 40.65
ATOM   5330  O   HOH W 418      28.756  59.314  74.937  1.00 35.85
ATOM   5331  O   HOH W 419      12.955  64.913  53.664  1.00 37.44
ATOM   5332  O   HOH W 420      23.309  24.474  50.751  1.00 45.73
ATOM   5333  O   HOH W 421       4.924  27.771  55.010  1.00 38.46
ATOM   5334  O   HOH W 422      19.668  63.675  93.111  1.00 41.69
ATOM   5335  O   HOH W 423      29.343  46.551  40.650  1.00 45.12
ATOM   5336  O   HOH W 424      28.230  48.770  60.385  1.00 40.19
ATOM   5337  O   HOH W 425      14.292  23.244  85.078  1.00 32.92
ATOM   5338  O   HOH W 426       7.179  66.298  48.617  1.00 47.43
ATOM   5339  O   HOH W 427     -11.542  35.315  64.224  1.00 45.74
ATOM   5340  O   HOH W 428      -0.665  52.874  80.688  1.00 44.47
ATOM   5341  O   HOH W 429      -1.483  67.437  44.508  1.00 88.79
ATOM   5342  O   HOH W 430      13.367  66.767  63.127  1.00 62.36
ATOM   5343  O   HOH W 431      35.060  48.549  63.034  1.00 39.85
ATOM   5344  O   HOH W 432      11.721  60.705  42.372  1.00 56.11
ATOM   5345  O   HOH W 433      14.261  27.588  85.980  1.00 51.35
ATOM   5346  O   HOH W 434      38.915  34.680  61.103  1.00 45.58
ATOM   5347  O   HOH W 435      23.421  46.416  42.605  1.00 43.02
ATOM   5348  O   HOH W 436      19.154  28.435  86.238  1.00 47.30
ATOM   5349  O   HOH W 437      26.658  43.571  47.275  1.00 34.55
ATOM   5350  O   HOH W 438      15.725  45.758  43.317  1.00 43.06
ATOM   5351  O   HOH W 439      36.546  66.825  82.882  1.00 30.83
ATOM   5352  O   HOH W 440       8.498  74.001  52.039  1.00 46.91
ATOM   5353  O   HOH W 441      27.161  71.692  92.146  1.00 39.00
ATOM   5354  O   HOH W 442      27.946  33.322  85.163  1.00 33.09
ATOM   5355  O   HOH W 443      15.310  10.169  65.089  1.00 63.51
ATOM   5356  O   HOH W 444     -13.474  41.923  71.321  1.00 44.29
ATOM   5357  O   HOH W 445      -6.593  61.419  56.587  1.00 36.57
ATOM   5358  O   HOH W 446      -4.107  19.122  50.753  1.00 80.39
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ATOM	5359	O	HOH W 447	21.809	59.754	43.571	1.00	64.03
ATOM	5360	O	HOH W 448	32.503	55.926	51.478	1.00	51.13
ATOM	5361	O	HOH W 449	17.433	44.251	80.196	1.00	52.95
ATOM	5362	O	HOH W 450	-2.882	28.319	76.738	1.00	57.32
ATOM	5363	O	HOH W 451	8.921	18.143	71.756	1.00	45.59
ATOM	5364	O	HOH W 452	46.415	37.408	72.673	1.00	74.61
ATOM	5365	O	HOH W 453	46.612	53.365	82.940	1.00	41.92
ATOM	5366	O	HOH W 454	39.885	53.691	74.043	1.00	45.59
ATOM	5367	O	HOH W 455	28.187	69.890	80.215	1.00	33.51
ATOM	5368	O	HOH W 456	10.557	47.292	72.599	1.00	14.04
ATOM	5369	O	HOH W 457	-0.687	61.537	70.644	1.00	40.63
ATOM	5370	O	HOH W 458	33.335	31.445	62.420	1.00	32.53
ATOM	5371	O	HOH W 459	26.658	39.474	43.256	1.00	32.50
ATOM	5372	O	HOH W 460	30.185	25.893	82.542	1.00	45.40
ATOM	5373	O	HOH W 461	20.780	39.620	40.793	1.00	60.63
ATOM	5374	O	HOH W 462	-13.804	40.073	67.421	1.00	42.25
ATOM	5375	O	HOH W 463	1.328	41.371	78.681	1.00	56.39
ATOM	5376	O	HOH W 464	33.554	26.796	70.488	1.00	37.48
ATOM	5377	O	HOH W 465	34.317	54.835	70.139	1.00	57.37
ATOM	5378	O	HOH W 466	1.781	11.779	66.821	1.00	47.25
ATOM	5379	O	HOH W 467	13.278	63.141	46.031	1.00	57.79
ATOM	5380	O	HOH W 468	37.787	55.035	100.999	1.00	53.08
ATOM	5381	O	HOH W 469	13.794	19.603	83.707	1.00	47.87
ATOM	5382	O	HOH W 470	25.470	45.716	93.468	1.00	36.66
ATOM	5383	O	HOH W 471	10.578	17.685	75.291	1.00	37.43
ATOM	5384	O	HOH W 472	52.811	39.642	69.739	1.00	44.12
ATOM	5385	O	HOH W 473	23.329	56.116	94.868	1.00	47.73
ATOM	5386	O	HOH W 474	35.936	48.711	65.428	1.00	58.05
ATOM	5387	O	HOH W 475	28.119	66.507	82.635	1.00	41.75
ATOM	5388	O	HOH W 476	-0.565	54.408	74.299	1.00	50.86
ATOM	5389	O	HOH W 477	4.072	70.416	58.486	1.00	35.45
ATOM	5390	O	HOH W 478	-3.762	26.579	63.779	1.00	53.91
ATOM	5391	O	HOH W 479	19.595	35.426	41.883	1.00	51.58
ATOM	5392	O	HOH W 480	24.800	7.578	70.043	1.00	41.13
ATOM	5393	O	HOH W 481	17.947	10.147	65.643	1.00	58.35
ATOM	5394	O	HOH W 482	31.312	44.348	64.437	1.00	48.49
ATOM	5395	O	HOH W 483	46.224	50.030	81.043	1.00	53.87
ATOM	5396	O	HOH W 484	35.129	52.464	51.431	1.00	54.76
ATOM	5397	O	HOH W 485	5.885	65.189	84.813	1.00	83.91
ATOM	5398	O	HOH W 486	20.281	16.200	55.863	1.00	46.25
ATOM	5399	O	HOH W 487	-5.180	21.053	56.028	1.00	37.00
ATOM	5400	O	HOH W 488	-11.188	38.067	41.229	1.00	69.22
ATOM	5401	O	HOH W 489	15.256	67.180	75.313	1.00	51.22
ATOM	5402	O	HOH W 490	3.374	63.019	56.672	1.00	42.46
ATOM	5403	O	HOH W 491	30.082	15.975	73.952	1.00	49.06
ATOM	5404	O	HOH W 492	-7.562	32.348	64.350	1.00	53.88
ATOM	5405	O	HOH W 493	14.504	69.382	77.201	1.00	79.52
ATOM	5406	O	HOH W 494	37.374	41.179	54.837	1.00	41.94
ATOM	5407	O	HOH W 495	22.651	62.725	71.998	1.00	46.62
ATOM	5408	O	HOH W 496	13.052	47.941	46.569	1.00	50.14
ATOM	5409	O	HOH W 497	-1.906	45.997	36.480	1.00	62.33
ATOM	5410	O	HOH W 498	35.740	52.464	53.693	1.00	55.17
ATOM	5411	O	HOH W 499	30.727	32.353	49.843	1.00	56.92
ATOM	5412	O	HOH W 500	0.025	32.686	42.604	1.00	48.23
ATOM	5413	O	HOH W 501	47.830	56.735	86.611	1.00	47.42
ATOM	5414	O	HOH W 502	18.095	60.627	94.715	1.00	65.28
ATOM	5415	O	HOH W 503	2.306	31.026	81.802	1.00	37.32
ATOM	5416	O	HOH W 504	-8.696	27.990	79.237	1.00	46.99
ATOM	5417	O	HOH W 505	22.034	70.217	89.142	1.00	47.15
ATOM	5418	O	HOH W 506	22.136	73.412	87.005	1.00	38.47
ATOM	5419	O	HOH W 507	-0.926	26.674	74.129	1.00	58.76

ATOM	5420	O	HOH W 508	-6.108	48.377	71.102	1.00	64.56
ATOM	5421	O	HOH W 509	39.520	39.424	56.576	1.00	72.80
ATOM	5422	O	HOH W 510	-4.081	58.518	47.377	1.00	60.65
ATOM	5423	O	HOH W 511	34.434	23.876	75.179	1.00	48.53
ATOM	5424	O	HOH W 512	17.400	63.380	50.267	1.00	40.76
ATOM	5425	O	HOH W 513	9.647	61.533	68.296	1.00	46.31
ATOM	5426	O	HOH W 514	41.430	58.961	99.800	1.00	49.23
ATOM	5427	O	HOH W 515	23.725	20.340	53.830	1.00	51.65
ATOM	5428	O	HOH W 516	15.576	16.190	78.131	1.00	61.27
ATOM	5429	O	HOH W 517	29.334	21.375	75.882	1.00	44.80
ATOM	5430	O	HOH W 518	-1.624	50.514	39.683	1.00	49.85
ATOM	5431	O	HOH W 519	8.771	69.104	72.705	1.00	47.81
ATOM	5432	O	HOH W 520	-21.311	45.001	55.217	1.00	64.01
ATOM	5433	O	HOH W 521	-1.392	54.790	67.171	1.00	53.90
ATOM	5434	O	HOH W 522	38.464	56.277	74.548	1.00	63.93
ATOM	5435	O	HOH W 523	33.977	32.491	81.832	1.00	50.18
ATOM	5436	O	HOH W 524	16.060	54.317	91.714	1.00	61.57
ATOM	5437	O	HOH W 525	21.009	33.700	89.176	1.00	65.31
ATOM	5438	O	HOH W 526	28.726	36.253	85.146	1.00	34.76
ATOM	5439	O	HOH W 527	24.767	40.641	41.912	1.00	44.57
ATOM	5440	O	HOH W 528	40.708	69.261	83.251	1.00	39.08
ATOM	5441	O	HOH W 529	28.264	48.404	92.814	1.00	34.64
ATOM	5442	O	HOH W 530	19.375	61.177	66.689	1.00	44.16
ATOM	5443	O	HOH W 531	6.639	42.598	82.079	1.00	100.00
ATOM	5444	O	HOH W 532	40.403	33.306	64.502	1.00	45.36
ATOM	5445	O	HOH W 533	16.172	18.117	52.264	1.00	44.76
ATOM	5446	O	HOH W 534	33.899	42.310	48.851	1.00	52.28
ATOM	5447	O	HOH W 535	22.675	9.894	76.942	1.00	51.28
ATOM	5448	O	HOH W 536	-11.295	52.730	60.674	1.00	76.16
ATOM	5449	O	HOH W 537	20.605	66.466	58.378	1.00	61.62
ATOM	5450	O	HOH W 538	35.282	26.341	50.576	1.00	58.72
ATOM	5451	O	HOH W 539	-0.234	39.225	40.255	1.00	54.13
ATOM	5452	O	HOH W 540	36.597	43.931	57.481	1.00	43.52
ATOM	5453	O	HOH W 541	20.374	41.951	74.120	1.00	47.12
ATOM	5454	O	HOH W 542	31.857	31.721	82.689	1.00	46.66
ATOM	5455	O	HOH W 543	34.733	63.213	92.164	1.00	55.58
ATOM	5456	O	HOH W 544	-20.506	26.471	44.860	1.00	73.89
ATOM	5457	O	HOH W 545	37.699	32.453	62.558	1.00	46.00
ATOM	5458	O	HOH W 546	8.296	38.910	67.642	1.00	39.42
ATOM	5459	O	HOH W 547	0.194	69.671	72.188	1.00	47.07
ATOM	5460	O	HOH W 548	32.212	52.268	51.134	1.00	52.82
ATOM	5461	O	HOH W 549	33.917	21.004	64.439	1.00	26.12
ATOM	5462	O	HOH W 550	42.573	58.916	95.252	1.00	20.78
ATOM	5463	O	HOH W 551	34.529	66.786	72.611	1.00	36.24

Table 10: Structure coordinates of LTA_4 hydrolase-thiolamine complex

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CRYST    68.560  132.150   83.270  90.00  90.00  90.00 P21212
SCALE1       0.01459   0.00000   0.00000        0.00000
SCALE2       0.00000   0.00757   0.00000        0.00000
SCALE3       0.00000   0.00000   0.01201        0.00000

          Atom res. Chain No.    x       y       z       occ   B-factor

ATOM      1  N   PRO A   1      -0.593  16.387  63.494  1.00 97.99
ATOM      2  CA  PRO A   1      -1.890  16.918  63.874  1.00 97.22
ATOM      3  C   PRO A   1      -2.210  18.371  63.525  1.00100.00
ATOM      4  O   PRO A   1      -2.402  18.667  62.342  1.00100.00
ATOM      5  CB  PRO A   1      -2.130  16.551  65.332  1.00 97.81
ATOM      6  CG  PRO A   1      -1.221  15.355  65.583  1.00100.00
ATOM      7  CD  PRO A   1      -0.290  15.233  64.369  1.00 97.05
ATOM      8  N   GLU A   2      -2.216  19.272  64.556  1.00 96.95
ATOM      9  CA  GLU A   2      -2.569  20.678  64.314  1.00 95.71
ATOM     10  C   GLU A   2      -2.188  21.701  65.386  1.00 94.33
ATOM     11  O   GLU A   2      -2.512  21.542  66.562  1.00 93.21
ATOM     12  CB  GLU A   2      -4.105  20.768  64.214  1.00 97.26
ATOM     13  CG  GLU A   2      -4.587  21.732  63.125  1.00100.00
ATOM     14  CD  GLU A   2      -4.351  21.139  61.767  1.00100.00
ATOM     15  OE1 GLU A   2      -3.301  21.261  61.152  1.00100.00
ATOM     16  OE2 GLU A   2      -5.361  20.398  61.368  1.00100.00
ATOM     17  N   ILE A   3      -1.550  22.799  64.944  1.00 86.29
ATOM     18  CA  ILE A   3      -1.148  23.905  65.820  1.00 81.53
ATOM     19  C   ILE A   3      -2.006  25.154  65.661  1.00 75.68
ATOM     20  O   ILE A   3      -2.835  25.288  64.763  1.00 76.97
ATOM     21  CB  ILE A   3       0.308  24.324  65.707  1.00 83.45
ATOM     22  CG1 ILE A   3       0.452  25.521  64.759  1.00 83.63
ATOM     23  CG2 ILE A   3       1.198  23.160  65.300  1.00 84.76
ATOM     24  CD1 ILE A   3      -0.184  25.361  63.375  1.00 91.36
ATOM     25  N   VAL A   4      -1.725  26.099  66.523  1.00 61.54
ATOM     26  CA  VAL A   4      -2.477  27.303  66.482  1.00 56.32
ATOM     27  C   VAL A   4      -1.658  28.552  66.623  1.00 50.98
ATOM     28  O   VAL A   4      -0.803  28.694  67.512  1.00 47.84
ATOM     29  CB  VAL A   4      -3.514  27.318  67.595  1.00 58.99
ATOM     30  CG1 VAL A   4      -3.735  28.754  68.047  1.00 58.40
ATOM     31  CG2 VAL A   4      -4.819  26.691  67.131  1.00 58.56
ATOM     32  N   ASP A   5      -2.012  29.486  65.732  1.00 39.38
ATOM     33  CA  ASP A   5      -1.403  30.782  65.763  1.00 32.64
ATOM     34  C   ASP A   5      -2.308  31.596  66.634  1.00 36.35
ATOM     35  O   ASP A   5      -3.343  32.051  66.171  1.00 38.30
ATOM     36  CB  ASP A   5      -1.252  31.492  64.400  1.00 30.79
ATOM     37  CG  ASP A   5      -0.251  32.581  64.563  1.00 29.96
ATOM     38  OD1 ASP A   5      -0.069  33.123  65.635  1.00 35.01
ATOM     39  OD2 ASP A   5       0.457  32.831  63.493  1.00 29.81
ATOM     40  N   THR A   6      -1.931  31.745  67.903  1.00 32.32
ATOM     41  CA  THR A   6      -2.710  32.507  68.842  1.00 32.08
ATOM     42  C   THR A   6      -2.701  34.011  68.557  1.00 40.63
ATOM     43  O   THR A   6      -3.484  34.759  69.132  1.00 46.68
ATOM     44  CB  THR A   6      -2.357  32.171  70.295  1.00 44.71
ATOM     45  OG1 THR A   6      -0.967  32.322  70.505  1.00 51.05
ATOM     46  CG2 THR A   6      -2.789  30.741  70.604  1.00 35.79
ATOM     47  N   CYS A   7      -1.842  34.480  67.656  1.00 32.51
ATOM     48  CA  CYS A   7      -1.797  35.923  67.335  1.00 28.92
ATOM     49  C   CYS A   7      -2.627  36.329  66.129  1.00 31.49
ATOM     50  O   CYS A   7      -2.780  37.523  65.875  1.00 25.42
ATOM     51  CB  CYS A   7      -0.362  36.410  67.107  1.00 27.38
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ATOM     52  SG  CYS A   7       0.686  35.944  68.518  1.00 32.02
ATOM     53  N   SER A   8      -3.140  35.315  65.383  1.00 34.03
ATOM     54  CA  SER A   8      -3.940  35.508  64.158  1.00 32.97
ATOM     55  C   SER A   8      -5.410  35.136  64.264  1.00 33.52
ATOM     56  O   SER A   8      -5.744  34.137  64.866  1.00 32.89
ATOM     57  CB  SER A   8      -3.363  34.754  62.980  1.00 34.07
ATOM     58  OG  SER A   8      -4.017  35.182  61.798  1.00 36.65
ATOM     59  N   LEU A   9      -6.289  35.921  63.635  1.00 30.79
ATOM     60  CA  LEU A   9      -7.724  35.649  63.672  1.00 31.91
ATOM     61  C   LEU A   9      -8.198  35.009  62.377  1.00 36.07
ATOM     62  O   LEU A   9      -9.359  34.626  62.216  1.00 38.61
ATOM     63  CB  LEU A   9      -8.514  36.958  63.874  1.00 32.47
ATOM     64  CG  LEU A   9      -8.306  37.688  65.212  1.00 35.39
ATOM     65  CD1 LEU A   9      -9.113  38.983  65.193  1.00 32.27
ATOM     66  CD2 LEU A   9      -8.746  36.816  66.397  1.00 33.25
ATOM     67  N   ALA A  10      -7.273  34.933  61.443  1.00 28.63
ATOM     68  CA  ALA A  10      -7.545  34.408  60.147  1.00 27.14
ATOM     69  C   ALA A  10      -7.643  32.921  60.090  1.00 34.34
ATOM     70  O   ALA A  10      -7.296  32.173  61.005  1.00 37.34
ATOM     71  CB  ALA A  10      -6.551  34.936  59.100  1.00 27.72
ATOM     72  N   SER A  11      -8.130  32.503  58.959  1.00 32.08
ATOM     73  CA  SER A  11      -8.256  31.115  58.708  1.00 32.03
ATOM     74  C   SER A  11      -6.838  30.519  58.656  1.00 32.67
ATOM     75  O   SER A  11      -5.927  31.028  57.986  1.00 29.29
ATOM     76  CB  SER A  11      -9.013  30.934  57.401  1.00 38.42
ATOM     77  OG  SER A  11     -10.391  30.728  57.648  1.00 44.17
ATOM     78  N   PRO A  12      -6.651  29.440  59.387  1.00 29.14
ATOM     79  CA  PRO A  12      -5.370  28.786  59.476  1.00 26.83
ATOM     80  C   PRO A  12      -4.935  28.176  58.173  1.00 32.64
ATOM     81  O   PRO A  12      -5.737  28.007  57.284  1.00 35.89
ATOM     82  CB  PRO A  12      -5.544  27.698  60.540  1.00 28.28
ATOM     83  CG  PRO A  12      -7.029  27.571  60.843  1.00 32.92
ATOM     84  CD  PRO A  12      -7.731  28.587  59.952  1.00 30.42
ATOM     85  N   ALA A  13      -3.645  27.836  58.063  1.00 30.63
ATOM     86  CA  ALA A  13      -3.066  27.236  56.855  1.00 28.36
ATOM     87  C   ALA A  13      -3.644  25.852  56.576  1.00 33.99
ATOM     88  O   ALA A  13      -3.455  25.240  55.528  1.00 31.60
ATOM     89  CB  ALA A  13      -1.561  27.133  57.050  1.00 27.68
ATOM     90  N   SER A  14      -4.338  25.352  57.571  1.00 31.10
ATOM     91  CA  SER A  14      -4.919  24.069  57.469  1.00 30.66
ATOM     92  C   SER A  14      -6.242  24.133  56.753  1.00 37.86
ATOM     93  O   SER A  14      -6.768  23.118  56.328  1.00 45.79
ATOM     94  CB  SER A  14      -5.005  23.386  58.825  1.00 34.33
ATOM     95  OG  SER A  14      -6.006  23.978  59.621  1.00 41.01
ATOM     96  N   VAL A  15      -6.785  25.327  56.630  1.00 32.80
ATOM     97  CA  VAL A  15      -8.036  25.529  55.917  1.00 31.81
ATOM     98  C   VAL A  15      -7.777  26.107  54.507  1.00 34.70
ATOM     99  O   VAL A  15      -8.241  25.576  53.494  1.00 31.96
ATOM    100  CB  VAL A  15      -9.033  26.336  56.720  1.00 33.07
ATOM    101  CG1 VAL A  15     -10.272  26.638  55.861  1.00 33.31
ATOM    102  CG2 VAL A  15      -9.412  25.538  57.949  1.00 30.32
ATOM    103  N   CYS A  16      -6.990  27.183  54.453  1.00 33.85
ATOM    104  CA  CYS A  16      -6.602  27.826  53.189  1.00 38.27
ATOM    105  C   CYS A  16      -5.206  28.388  53.265  1.00 37.14
ATOM    106  O   CYS A  16      -4.616  28.534  54.322  1.00 39.70
ATOM    107  CB  CYS A  16      -7.589  28.870  52.581  1.00 42.09
ATOM    108  SG  CYS A  16      -7.844  30.418  53.540  1.00 47.38
ATOM    109  N   ARG A  17      -4.679  28.722  52.132  1.00 32.10
ATOM    110  CA  ARG A  17      -3.349  29.262  52.101  1.00 32.54
ATOM    111  C   ARG A  17      -3.210  30.307  51.005  1.00 34.56
ATOM    112  O   ARG A  17      -3.511  30.065  49.842  1.00 35.07
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ATOM    113  CB  ARG A  17      -2.371  28.152  51.758  1.00 36.83
ATOM    114  CG  ARG A  17      -1.779  27.391  52.915  1.00 40.61
ATOM    115  CD  ARG A  17      -1.472  25.970  52.503  1.00 27.18
ATOM    116  NE  ARG A  17      -1.963  25.026  53.501  1.00 52.41
ATOM    117  CZ  ARG A  17      -1.244  24.036  54.035  1.00 69.41
ATOM    118  NH1 ARG A  17       0.020  23.812  53.683  1.00 54.86
ATOM    119  NH2 ARG A  17      -1.810  23.246  54.952  1.00 49.68
ATOM    120  N   THR A  18      -2.711  31.454  51.378  1.00 27.06
ATOM    121  CA  THR A  18      -2.489  32.477  50.428  1.00 26.12
ATOM    122  C   THR A  18      -1.250  32.110  49.653  1.00 30.83
ATOM    123  O   THR A  18      -0.174  31.964  50.194  1.00 29.06
ATOM    124  CB  THR A  18      -2.276  33.810  51.134  1.00 34.27
ATOM    125  OG1 THR A  18      -3.481  34.261  51.738  1.00 32.95
ATOM    126  CG2 THR A  18      -1.730  34.839  50.156  1.00 35.91
ATOM    127  N   LYS A  19      -1.408  31.955  48.365  1.00 31.55
ATOM    128  CA  LYS A  19      -0.298  31.615  47.511  1.00 31.74
ATOM    129  C   LYS A  19       0.359  32.848  46.906  1.00 33.90
ATOM    130  O   LYS A  19       1.513  32.834  46.520  1.00 34.57
ATOM    131  CB  LYS A  19      -0.795  30.697  46.398  1.00 36.08
ATOM    132  CG  LYS A  19      -1.332  29.368  46.924  1.00 62.54
ATOM    133  CD  LYS A  19      -0.281  28.257  47.057  1.00 82.23
ATOM    134  CE  LYS A  19       0.093  27.880  48.496  1.00 77.50
ATOM    135  NZ  LYS A  19       1.553  27.849  48.745  1.00 55.63
ATOM    136  N   HIS A  20      -0.387  33.928  46.810  1.00 31.40
ATOM    137  CA  HIS A  20       0.160  35.122  46.198  1.00 29.22
ATOM    138  C   HIS A  20      -0.655  36.345  46.517  1.00 34.68
ATOM    139  O   HIS A  20      -1.833  36.239  46.846  1.00 35.34
ATOM    140  CB  HIS A  20       0.123  34.956  44.666  1.00 26.47
ATOM    141  CG  HIS A  20       0.865  36.022  43.970  1.00 26.77
ATOM    142  ND1 HIS A  20       2.249  36.046  43.980  1.00 28.92
ATOM    143  CD2 HIS A  20       0.415  37.091  43.280  1.00 27.43
ATOM    144  CE1 HIS A  20       2.622  37.126  43.301  1.00 28.21
ATOM    145  NE2 HIS A  20       1.536  37.781  42.865  1.00 28.18
ATOM    146  N   LEU A  21       0.000  37.492  46.390  1.00 30.14
ATOM    147  CA  LEU A  21      -0.596  38.782  46.610  1.00 31.02
ATOM    148  C   LEU A  21      -0.134  39.786  45.562  1.00 38.34
ATOM    149  O   LEU A  21       1.073  39.952  45.312  1.00 37.30
ATOM    150  CB  LEU A  21      -0.342  39.363  47.999  1.00 31.30
ATOM    151  CG  LEU A  21      -0.611  40.880  48.047  1.00 32.33
ATOM    152  CD1 LEU A  21      -2.088  41.192  48.324  1.00 27.10
ATOM    153  CD2 LEU A  21       0.277  41.522  49.100  1.00 32.86
ATOM    154  N   HIS A  22      -1.127  40.442  44.951  1.00 35.47
ATOM    155  CA  HIS A  22      -0.895  41.452  43.920  1.00 34.24
ATOM    156  C   HIS A  22      -1.249  42.742  44.550  1.00 33.99
ATOM    157  O   HIS A  22      -2.402  42.957  44.905  1.00 35.72
ATOM    158  CB  HIS A  22      -1.720  41.244  42.624  1.00 33.38
ATOM    159  CG  HIS A  22      -1.350  42.256  41.615  1.00 35.97
ATOM    160  ND1 HIS A  22      -0.030  42.576  41.384  1.00 38.81
ATOM    161  CD2 HIS A  22      -2.125  43.043  40.830  1.00 39.07
ATOM    162  CE1 HIS A  22      -0.019  43.534  40.462  1.00 38.66
ATOM    163  NE2 HIS A  22      -1.262  43.829  40.103  1.00 39.13
ATOM    164  N   LEU A  23      -0.235  43.539  44.757  1.00 30.17
ATOM    165  CA  LEU A  23      -0.416  44.793  45.405  1.00 33.32
ATOM    166  C   LEU A  23      -0.203  45.949  44.440  1.00 44.46
ATOM    167  O   LEU A  23       0.828  46.068  43.761  1.00 44.06
ATOM    168  CB  LEU A  23       0.446  44.882  46.680  1.00 33.72
ATOM    169  CG  LEU A  23      -0.141  45.682  47.871  1.00 33.15
ATOM    170  CD1 LEU A  23       0.780  46.835  48.172  1.00 26.07
ATOM    171  CD2 LEU A  23      -1.539  46.213  47.609  1.00 35.39
ATOM    172  N   ARG A  24      -1.256  46.765  44.395  1.00 42.83
ATOM    173  CA  ARG A  24      -1.406  47.964  43.596  1.00 41.79
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ATOM	174	C	ARG	A	24	-1.930	49.005	44.562	1.00	39.15
ATOM	175	O	ARG	A	24	-3.025	48.859	45.107	1.00	39.85
ATOM	176	CB	ARG	A	24	-2.458	47.716	42.504	1.00	46.35
ATOM	177	CG	ARG	A	24	-2.054	46.750	41.382	1.00	50.50
ATOM	178	CD	ARG	A	24	-2.754	47.058	40.043	1.00	80.27
ATOM	179	NE	ARG	A	24	-4.200	46.798	40.062	1.00	95.12
ATOM	180	CZ	ARG	A	24	-5.152	47.703	39.826	1.00	100.00
ATOM	181	NH1	ARG	A	24	-4.863	48.973	39.483	1.00	100.00
ATOM	182	NH2	ARG	A	24	-6.432	47.326	39.865	1.00	100.00
ATOM	183	N	CYS	A	25	-1.164	50.028	44.844	1.00	32.39
ATOM	184	CA	CYS	A	25	-1.698	50.969	45.813	1.00	33.30
ATOM	185	C	CYS	A	25	-1.061	52.325	45.724	1.00	34.82
ATOM	186	O	CYS	A	25	-0.012	52.514	45.076	1.00	31.03
ATOM	187	CB	CYS	A	25	-1.503	50.440	47.257	1.00	34.67
ATOM	188	SG	CYS	A	25	0.231	50.529	47.798	1.00	38.07
ATOM	189	N	SER	A	26	-1.711	53.257	46.418	1.00	34.39
ATOM	190	CA	SER	A	26	-1.196	54.601	46.437	1.00	36.77
ATOM	191	C	SER	A	26	-0.963	55.133	47.821	1.00	39.85
ATOM	192	O	SER	A	26	-1.738	54.853	48.757	1.00	37.56
ATOM	193	CB	SER	A	26	-1.889	55.600	45.530	1.00	42.70
ATOM	194	OG	SER	A	26	-0.899	56.330	44.824	1.00	61.74
ATOM	195	N	VAL	A	27	0.133	55.897	47.886	1.00	39.43
ATOM	196	CA	VAL	A	27	0.624	56.583	49.081	1.00	41.31
ATOM	197	C	VAL	A	27	0.209	58.043	49.082	1.00	44.32
ATOM	198	O	VAL	A	27	0.562	58.799	48.187	1.00	45.24
ATOM	199	CB	VAL	A	27	2.135	56.531	49.207	1.00	46.35
ATOM	200	CG1	VAL	A	27	2.524	57.207	50.522	1.00	45.62
ATOM	201	CG2	VAL	A	27	2.592	55.079	49.178	1.00	47.20
ATOM	202	N	ASP	A	28	-0.553	58.417	50.093	1.00	37.94
ATOM	203	CA	ASP	A	28	-1.040	59.764	50.237	1.00	35.28
ATOM	204	C	ASP	A	28	-0.595	60.366	51.538	1.00	33.85
ATOM	205	O	ASP	A	28	-1.181	60.099	52.598	1.00	28.52
ATOM	206	CB	ASP	A	28	-2.559	59.807	50.189	1.00	37.09
ATOM	207	CG	ASP	A	28	-3.055	61.205	50.095	1.00	55.20
ATOM	208	OD1	ASP	A	28	-2.611	62.119	50.767	1.00	59.17
ATOM	209	OD2	ASP	A	28	-3.993	61.335	49.192	1.00	61.41
ATOM	210	N	PHE	A	29	0.436	61.174	51.405	1.00	36.42
ATOM	211	CA	PHE	A	29	1.044	61.888	52.512	1.00	43.07
ATOM	212	C	PHE	A	29	0.105	62.928	53.077	1.00	51.14
ATOM	213	O	PHE	A	29	0.161	63.279	54.257	1.00	51.35
ATOM	214	CB	PHE	A	29	2.410	62.517	52.143	1.00	47.77
ATOM	215	CG	PHE	A	29	3.519	61.485	52.079	1.00	50.86
ATOM	216	CD1	PHE	A	29	4.066	60.957	53.247	1.00	52.08
ATOM	217	CD2	PHE	A	29	3.996	61.001	50.863	1.00	53.94
ATOM	218	CE1	PHE	A	29	5.075	59.995	53.215	1.00	52.83
ATOM	219	CE2	PHE	A	29	5.013	60.046	50.813	1.00	56.46
ATOM	220	CZ	PHE	A	29	5.559	59.538	51.992	1.00	53.39
ATOM	221	N	THR	A	30	-0.766	63.420	52.220	1.00	47.10
ATOM	222	CA	THR	A	30	-1.718	64.386	52.654	1.00	45.48
ATOM	223	C	THR	A	30	-2.788	63.715	53.509	1.00	48.41
ATOM	224	O	THR	A	30	-3.045	64.082	54.649	1.00	48.64
ATOM	225	CB	THR	A	30	-2.283	65.097	51.434	1.00	54.06
ATOM	226	OG1	THR	A	30	-1.428	66.186	51.107	1.00	50.68
ATOM	227	CG2	THR	A	30	-3.697	65.568	51.745	1.00	60.28
ATOM	228	N	ARG	A	31	-3.392	62.683	52.978	1.00	46.66
ATOM	229	CA	ARG	A	31	-4.404	61.987	53.734	1.00	47.88
ATOM	230	C	ARG	A	31	-3.826	60.999	54.750	1.00	45.46
ATOM	231	O	ARG	A	31	-4.590	60.468	55.551	1.00	41.52
ATOM	232	CB	ARG	A	31	-5.335	61.214	52.805	1.00	56.73
ATOM	233	CG	ARG	A	31	-5.950	62.065	51.700	1.00	84.16
ATOM	234	CD	ARG	A	31	-7.338	61.568	51.284	1.00	100.00

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ATOM    235  NE  ARG A  31      -7.344  60.450  50.327  1.00100.00
ATOM    236  CZ  ARG A  31      -8.148  60.371  49.251  1.00100.00
ATOM    237  NH1 ARG A  31      -9.034  61.324  48.944  1.00100.00
ATOM    238  NH2 ARG A  31      -8.062  59.298  48.460  1.00100.00
ATOM    239  N   ARG A  32      -2.489  60.752  54.683  1.00 39.71
ATOM    240  CA  ARG A  32      -1.751  59.798  55.531  1.00 39.09
ATOM    241  C   ARG A  32      -2.324  58.411  55.379  1.00 39.62
ATOM    242  O   ARG A  32      -2.495  57.655  56.337  1.00 33.10
ATOM    243  CB  ARG A  32      -1.523  60.115  57.022  1.00 37.14
ATOM    244  CG  ARG A  32      -1.197  61.569  57.337  1.00 71.25
ATOM    245  CD  ARG A  32       0.277  61.834  57.686  1.00100.00
ATOM    246  NE  ARG A  32       0.703  61.299  58.986  1.00100.00
ATOM    247  CZ  ARG A  32       1.284  62.005  59.961  1.00 79.51
ATOM    248  NH1 ARG A  32       1.522  63.308  59.831  1.00 55.73
ATOM    249  NH2 ARG A  32       1.626  61.387  61.098  1.00 44.96
ATOM    250  N   THR A  33      -2.612  58.068  54.139  1.00 39.83
ATOM    251  CA  THR A  33      -3.162  56.752  53.902  1.00 39.31
ATOM    252  C   THR A  33      -2.543  56.010  52.760  1.00 41.13
ATOM    253  O   THR A  33      -1.853  56.574  51.926  1.00 42.93
ATOM    254  CB  THR A  33      -4.635  56.835  53.641  1.00 43.44
ATOM    255  OG1 THR A  33      -4.798  57.636  52.468  1.00 40.17
ATOM    256  CG2 THR A  33      -5.245  57.468  54.880  1.00 38.71
ATOM    257  N   LEU A  34      -2.822  54.717  52.762  1.00 35.26
ATOM    258  CA  LEU A  34      -2.372  53.799  51.745  1.00 35.20
ATOM    259  C   LEU A  34      -3.632  53.293  51.098  1.00 32.49
ATOM    260  O   LEU A  34      -4.474  52.670  51.751  1.00 30.96
ATOM    261  CB  LEU A  34      -1.522  52.651  52.322  1.00 37.07
ATOM    262  CG  LEU A  34      -0.149  52.571  51.685  1.00 42.99
ATOM    263  CD1 LEU A  34       0.648  51.425  52.285  1.00 40.58
ATOM    264  CD2 LEU A  34      -0.360  52.302  50.208  1.00 50.83
ATOM    265  N   THR A  35      -3.800  53.632  49.838  1.00 28.72
ATOM    266  CA  THR A  35      -5.017  53.228  49.198  1.00 31.26
ATOM    267  C   THR A  35      -4.838  52.329  48.013  1.00 36.54
ATOM    268  O   THR A  35      -3.940  52.546  47.187  1.00 34.70
ATOM    269  CB  THR A  35      -5.877  54.427  48.813  1.00 44.88
ATOM    270  OG1 THR A  35      -5.484  55.549  49.579  1.00 58.59
ATOM    271  CG2 THR A  35      -7.324  54.094  49.109  1.00 49.42
ATOM    272  N   GLY A  36      -5.726  51.329  47.950  1.00 32.57
ATOM    273  CA  GLY A  36      -5.696  50.405  46.837  1.00 33.89
ATOM    274  C   GLY A  36      -6.418  49.074  46.993  1.00 34.50
ATOM    275  O   GLY A  36      -7.441  48.919  47.678  1.00 31.78
ATOM    276  N   THR A  37      -5.836  48.103  46.293  1.00 35.93
ATOM    277  CA  THR A  37      -6.327  46.723  46.281  1.00 36.12
ATOM    278  C   THR A  37      -5.268  45.696  46.473  1.00 35.67
ATOM    279  O   THR A  37      -4.155  45.795  45.964  1.00 33.86
ATOM    280  CB  THR A  37      -7.119  46.306  45.050  1.00 42.21
ATOM    281  OG1 THR A  37      -6.507  46.804  43.870  1.00 30.98
ATOM    282  CG2 THR A  37      -8.547  46.793  45.229  1.00 50.03
ATOM    283  N   ALA A  38      -5.687  44.705  47.220  1.00 32.95
ATOM    284  CA  ALA A  38      -4.886  43.570  47.533  1.00 33.45
ATOM    285  C   ALA A  38      -5.481  42.374  46.824  1.00 35.47
ATOM    286  O   ALA A  38      -6.580  41.906  47.151  1.00 32.91
ATOM    287  CB  ALA A  38      -4.845  43.341  49.044  1.00 33.72
ATOM    288  N   ALA A  39      -4.764  41.874  45.834  1.00 32.70
ATOM    289  CA  ALA A  39      -5.274  40.702  45.140  1.00 31.59
ATOM    290  C   ALA A  39      -4.692  39.464  45.770  1.00 32.11
ATOM    291  O   ALA A  39      -3.514  39.147  45.608  1.00 32.46
ATOM    292  CB  ALA A  39      -4.934  40.729  43.662  1.00 32.13
ATOM    293  N   LEU A  40      -5.505  38.774  46.508  1.00 27.06
ATOM    294  CA  LEU A  40      -5.001  37.593  47.155  1.00 29.04
ATOM    295  C   LEU A  40      -5.331  36.322  46.364  1.00 36.88
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ATOM	296	O	LEU	A	40	-6.485	36.100	45.963	1.00	28.89
ATOM	297	CB	LEU	A	40	-5.587	37.451	48.600	1.00	29.39
ATOM	298	CG	LEU	A	40	-5.303	38.598	49.559	1.00	31.39
ATOM	299	CD1	LEU	A	40	-5.435	38.063	50.970	1.00	32.62
ATOM	300	CD2	LEU	A	40	-3.879	39.019	49.355	1.00	31.60
ATOM	301	N	THR	A	41	-4.310	35.470	46.165	1.00	42.40
ATOM	302	CA	THR	A	41	-4.523	34.210	45.488	1.00	43.93
ATOM	303	C	THR	A	41	-4.548	33.155	46.552	1.00	43.75
ATOM	304	O	THR	A	41	-3.510	32.827	47.115	1.00	45.22
ATOM	305	CB	THR	A	41	-3.511	33.892	44.402	1.00	55.44
ATOM	306	OG1	THR	A	41	-3.604	34.885	43.418	1.00	55.57
ATOM	307	CG2	THR	A	41	-3.872	32.544	43.802	1.00	47.78
ATOM	308	N	VAL	A	42	-5.755	32.688	46.848	1.00	33.25
ATOM	309	CA	VAL	A	42	-5.946	31.720	47.893	1.00	32.21
ATOM	310	C	VAL	A	42	-6.166	30.312	47.380	1.00	40.56
ATOM	311	O	VAL	A	42	-6.827	30.105	46.376	1.00	42.56
ATOM	312	CB	VAL	A	42	-7.017	32.153	48.920	1.00	36.45
ATOM	313	CG1	VAL	A	42	-6.817	31.451	50.266	1.00	36.89
ATOM	314	CG2	VAL	A	42	-6.963	33.665	49.170	1.00	36.10
ATOM	315	N	GLN	A	43	-5.590	29.357	48.117	1.00	35.91
ATOM	316	CA	GLN	A	43	-5.678	27.945	47.838	1.00	31.59
ATOM	317	C	GLN	A	43	-6.346	27.244	48.988	1.00	38.98
ATOM	318	O	GLN	A	43	-5.916	27.317	50.144	1.00	40.92
ATOM	319	CB	GLN	A	43	-4.305	27.319	47.568	1.00	30.50
ATOM	320	CG	GLN	A	43	-4.362	25.800	47.259	1.00	53.80
ATOM	321	CD	GLN	A	43	-2.986	25.177	47.099	1.00	62.47
ATOM	322	OE1	GLN	A	43	-2.569	24.842	45.978	1.00	57.34
ATOM	323	NE2	GLN	A	43	-2.274	25.037	48.224	1.00	43.72
ATOM	324	N	SER	A	44	-7.423	26.555	48.664	1.00	33.83
ATOM	325	CA	SER	A	44	-8.166	25.839	49.678	1.00	31.38
ATOM	326	C	SER	A	44	-7.495	24.557	50.117	1.00	42.10
ATOM	327	O	SER	A	44	-6.955	23.814	49.292	1.00	42.78
ATOM	328	CB	SER	A	44	-9.576	25.530	49.226	1.00	28.60
ATOM	329	OG	SER	A	44	-10.234	24.785	50.224	1.00	34.57
ATOM	330	N	GLN	A	45	-7.579	24.286	51.423	1.00	38.84
ATOM	331	CA	GLN	A	45	-7.007	23.082	51.994	1.00	37.05
ATOM	332	C	GLN	A	45	-8.082	22.050	52.269	1.00	47.57
ATOM	333	O	GLN	A	45	-7.801	20.917	52.678	1.00	42.94
ATOM	334	CB	GLN	A	45	-6.247	23.411	53.280	1.00	36.10
ATOM	335	CG	GLN	A	45	-5.246	24.539	53.034	1.00	54.73
ATOM	336	CD	GLN	A	45	-4.323	24.206	51.888	1.00	45.43
ATOM	337	OE1	GLN	A	45	-4.257	24.888	50.833	1.00	39.23
ATOM	338	NE2	GLN	A	45	-3.621	23.121	52.092	1.00	29.80
ATOM	339	N	GLU	A	46	-9.330	22.459	52.048	1.00	50.54
ATOM	340	CA	GLU	A	46	-10.454	21.573	52.283	1.00	50.99
ATOM	341	C	GLU	A	46	-11.496	21.583	51.179	1.00	54.49
ATOM	342	O	GLU	A	46	-11.518	22.406	50.261	1.00	54.00
ATOM	343	CB	GLU	A	46	-11.139	21.793	53.657	1.00	51.61
ATOM	344	CG	GLU	A	46	-10.581	22.979	54.454	1.00	55.93
ATOM	345	CD	GLU	A	46	-11.427	23.329	55.646	1.00	78.67
ATOM	346	OE1	GLU	A	46	-12.563	23.765	55.543	1.00	69.56
ATOM	347	OE2	GLU	A	46	-10.814	23.129	56.796	1.00	75.10
ATOM	348	N	ASP	A	47	-12.387	20.630	51.300	1.00	48.90
ATOM	349	CA	ASP	A	47	-13.450	20.549	50.362	1.00	49.03
ATOM	350	C	ASP	A	47	-14.591	21.425	50.846	1.00	55.15
ATOM	351	O	ASP	A	47	-14.760	21.631	52.044	1.00	56.66
ATOM	352	CB	ASP	A	47	-13.913	19.099	50.227	1.00	50.20
ATOM	353	CG	ASP	A	47	-13.083	18.376	49.218	1.00	66.88
ATOM	354	OD1	ASP	A	47	-12.340	18.945	48.434	1.00	66.27
ATOM	355	OD2	ASP	A	47	-13.235	17.081	49.284	1.00	76.37
ATOM	356	N	ASN	A	48	-15.391	21.941	49.929	1.00	50.25

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ATOM    358  C   ASN A  48     -16.115  24.000  51.115  1.00 43.07
ATOM    359  O   ASN A  48     -16.699  24.351  52.138  1.00 39.78
ATOM    360  CB  ASN A  48     -17.559  21.909  51.117  1.00 51.19
ATOM    361  CG  ASN A  48     -18.985  22.417  51.005  1.00 76.39
ATOM    362  OD1 ASN A  48     -19.594  22.348  49.929  1.00 85.15
ATOM    363  ND2 ASN A  48     -19.515  22.928  52.115  1.00 68.29
ATOM    364  N   LEU A  49     -15.113  24.688  50.628  1.00 35.36
ATOM    365  CA  LEU A  49     -14.728  25.874  51.335  1.00 34.40
ATOM    366  C   LEU A  49     -15.601  27.009  50.851  1.00 47.38
ATOM    367  O   LEU A  49     -15.421  27.515  49.734  1.00 45.47
ATOM    368  CB  LEU A  49     -13.239  26.152  51.173  1.00 31.04
ATOM    369  CG  LEU A  49     -12.781  27.394  51.885  1.00 29.82
ATOM    370  CD1 LEU A  49     -12.725  27.137  53.385  1.00 28.15
ATOM    371  CD2 LEU A  49     -11.394  27.753  51.368  1.00 30.24
ATOM    372  N   ARG A  50     -16.568  27.363  51.699  1.00 50.49
ATOM    373  CA  ARG A  50     -17.560  28.392  51.401  1.00 52.83
ATOM    374  C   ARG A  50     -17.169  29.838  51.702  1.00 55.57
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ATOM    375  O   ARG A  50     -17.627  30.760  51.011  1.00 53.89
ATOM    376  CB  ARG A  50     -18.928  28.028  51.986  1.00 58.35
ATOM    377  CG  ARG A  50     -19.863  27.354  50.980  1.00 74.76
ATOM    378  CD  ARG A  50     -20.438  26.024  51.462  1.00 81.60
ATOM    379  NE  ARG A  50     -21.214  25.355  50.415  1.00 94.37
ATOM    380  CZ  ARG A  50     -22.465  24.888  50.538  1.00100.00
ATOM    381  NH1 ARG A  50     -23.151  24.990  51.687  1.00100.00
ATOM    382  NH2 ARG A  50     -23.046  24.297  49.471  1.00 74.34
ATOM    383  N   SER A  51     -16.331  30.006  52.743  1.00 54.71
ATOM    384  CA  SER A  51     -15.823  31.297  53.224  1.00 53.49
ATOM    385  C   SER A  51     -14.495  31.156  53.955  1.00 53.57
ATOM    386  O   SER A  51     -14.146  30.062  54.420  1.00 52.93
ATOM    387  CB  SER A  51     -16.788  31.900  54.232  1.00 54.03
ATOM    388  OG  SER A  51     -16.871  31.048  55.373  1.00 45.15
ATOM    389  N   LEU A  52     -13.796  32.298  54.067  1.00 47.19
ATOM    390  CA  LEU A  52     -12.519  32.422  54.762  1.00 45.66
ATOM    391  C   LEU A  52     -12.415  33.671  55.640  1.00 50.43
ATOM    392  O   LEU A  52     -13.145  34.633  55.471  1.00 52.64
ATOM    393  CB  LEU A  52     -11.235  32.117  53.923  1.00 44.20
ATOM    394  CG  LEU A  52     -10.896  33.044  52.745  1.00 43.98
ATOM    395  CD1 LEU A  52     -11.739  32.687  51.554  1.00 42.82
ATOM    396  CD2 LEU A  52     -11.128  34.501  53.094  1.00 44.71
ATOM    397  N   VAL A  53     -11.483  33.658  56.579  1.00 44.97
ATOM    398  CA  VAL A  53     -11.271  34.781  57.455  1.00 41.69
ATOM    399  C   VAL A  53      -9.859  35.309  57.339  1.00 44.25
ATOM    400  O   VAL A  53      -8.866  34.551  57.302  1.00 45.42
ATOM    401  CB  VAL A  53     -11.565  34.420  58.906  1.00 45.48
ATOM    402  CG1 VAL A  53     -11.223  35.554  59.853  1.00 44.94
ATOM    403  CG2 VAL A  53     -13.030  34.073  59.050  1.00 45.79
ATOM    404  N   LEU A  54      -9.796  36.627  57.166  1.00 35.12
ATOM    405  CA  LEU A  54      -8.555  37.333  57.080  1.00 34.14
ATOM    406  C   LEU A  54      -8.377  38.207  58.326  1.00 38.92
ATOM    407  O   LEU A  54      -9.281  38.457  59.108  1.00 37.45
ATOM    408  CB  LEU A  54      -8.461  38.216  55.831  1.00 34.73
ATOM    409  CG  LEU A  54      -8.539  37.469  54.510  1.00 40.25
ATOM    410  CD1 LEU A  54      -8.416  38.488  53.374  1.00 40.69
ATOM    411  CD2 LEU A  54      -7.424  36.428  54.415  1.00 39.64
ATOM    412  N   ASP A  55      -7.192  38.674  58.524  1.00 35.02
ATOM    413  CA  ASP A  55      -6.918  39.526  59.627  1.00 31.65
ATOM    414  C   ASP A  55      -6.956  40.941  59.078  1.00 40.38
ATOM    415  O   ASP A  55      -6.754  41.151  57.886  1.00 39.98
ATOM    416  CB  ASP A  55      -5.494  39.232  60.075  1.00 30.92
ATOM    417  CG  ASP A  55      -5.397  38.103  61.037  1.00 35.96
ATOM    418  OD1 ASP A  55      -6.049  38.074  62.066  1.00 38.49
ATOM    419  OD2 ASP A  55      -4.491  37.205  60.682  1.00 36.53
ATOM    420  N   THR A  56      -7.196  41.900  59.963  1.00 42.93
ATOM    421  CA  THR A  56      -7.243  43.334  59.661  1.00 41.75
ATOM    422  C   THR A  56      -7.101  44.128  60.967  1.00 37.46
ATOM    423  O   THR A  56      -7.517  43.687  62.049  1.00 36.98
ATOM    424  CB  THR A  56      -8.514  43.825  58.894  1.00 37.17
ATOM    425  OG1 THR A  56      -9.587  43.957  59.805  1.00 31.84
ATOM    426  CG2 THR A  56      -8.910  42.943  57.714  1.00 33.58
ATOM    427  N   LYS A  57      -6.513  45.304  60.863  1.00 26.63
ATOM    428  CA  LYS A  57      -6.363  46.134  62.020  1.00 25.64
ATOM    429  C   LYS A  57      -6.585  47.539  61.547  1.00 30.08
ATOM    430  O   LYS A  57      -5.854  48.012  60.711  1.00 25.68
ATOM    431  CB  LYS A  57      -4.991  45.983  62.641  1.00 27.34
ATOM    432  CG  LYS A  57      -4.907  46.387  64.100  1.00 35.83
ATOM    433  CD  LYS A  57      -3.514  46.904  64.471  1.00 35.57
ATOM    434  CE  LYS A  57      -2.901  46.225  65.689  1.00 50.54
ATOM    435  NZ  LYS A  57      -2.521  47.180  66.757  1.00 55.43
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ATOM    436  N   ASP A  58      -7.617  48.188  62.065  1.00 32.68
ATOM    437  CA  ASP A  58      -7.895  49.545  61.665  1.00 35.27
ATOM    438  C   ASP A  58      -7.894  49.710  60.149  1.00 38.24
ATOM    439  O   ASP A  58      -7.289  50.627  59.571  1.00 35.86
ATOM    440  CB  ASP A  58      -6.968  50.550  62.386  1.00 37.22
ATOM    441  CG  ASP A  58      -7.041  50.393  63.880  1.00 50.71
ATOM    442  OD1 ASP A  58      -8.073  50.136  64.478  1.00 57.20
ATOM    443  OD2 ASP A  58      -5.878  50.562  64.463  1.00 45.82
ATOM    444  N   LEU A  59      -8.604  48.796  59.516  1.00 37.68
ATOM    445  CA  LEU A  59      -8.720  48.813  58.079  1.00 39.36
ATOM    446  C   LEU A  59     -10.077  49.243  57.555  1.00 45.51
ATOM    447  O   LEU A  59     -11.146  48.946  58.120  1.00 44.18
ATOM    448  CB  LEU A  59      -8.265  47.506  57.422  1.00 38.42
ATOM    449  CG  LEU A  59      -6.762  47.475  57.218  1.00 37.40
ATOM    450  CD1 LEU A  59      -6.392  46.173  56.526  1.00 36.39
ATOM    451  CD2 LEU A  59      -6.321  48.655  56.361  1.00 36.57
ATOM    452  N   THR A  60      -9.984  49.949  56.437  1.00 42.59
ATOM    453  CA  THR A  60     -11.132  50.483  55.734  1.00 42.63
ATOM    454  C   THR A  60     -11.357  49.705  54.463  1.00 38.18
ATOM    455  O   THR A  60     -10.632  49.856  53.454  1.00 34.33
ATOM    456  CB  THR A  60     -11.030  52.028  55.532  1.00 65.15
ATOM    457  OG1 THR A  60     -11.806  52.736  56.504  1.00 67.56
ATOM    458  CG2 THR A  60     -11.345  52.480  54.104  1.00 56.89
ATOM    459  N   ILE A  61     -12.360  48.847  54.571  1.00 33.39
ATOM    460  CA  ILE A  61     -12.753  47.975  53.482  1.00 35.89
ATOM    461  C   ILE A  61     -13.726  48.634  52.533  1.00 41.05
ATOM    462  O   ILE A  61     -14.913  48.706  52.840  1.00 40.08
ATOM    463  CB  ILE A  61     -13.403  46.670  53.944  1.00 39.71
ATOM    464  CG1 ILE A  61     -12.482  45.826  54.832  1.00 39.90
ATOM    465  CG2 ILE A  61     -13.788  45.900  52.691  1.00 38.96
ATOM    466  CD1 ILE A  61     -11.027  45.851  54.358  1.00 49.61
ATOM    467  N   GLU A  62     -13.219  49.080  51.391  1.00 40.23
ATOM    468  CA  GLU A  62     -14.040  49.700  50.365  1.00 41.73
ATOM    469  C   GLU A  62     -14.986  48.633  49.826  1.00 47.09
ATOM    470  O   GLU A  62     -16.207  48.726  49.926  1.00 47.52
ATOM    471  CB  GLU A  62     -13.138  50.272  49.239  1.00 44.08
ATOM    472  CG  GLU A  62     -13.765  51.406  48.381  1.00 64.08
ATOM    473  CD  GLU A  62     -14.686  50.946  47.256  1.00100.00
ATOM    474  OE1 GLU A  62     -15.458  50.002  47.376  1.00100.00
ATOM    475  OE2 GLU A  62     -14.591  51.670  46.146  1.00 75.11
ATOM    476  N   LYS A  63     -14.399  47.580  49.267  1.00 43.46
ATOM    477  CA  LYS A  63     -15.168  46.474  48.746  1.00 40.53
ATOM    478  C   LYS A  63     -14.250  45.307  48.489  1.00 45.38
ATOM    479  O   LYS A  63     -13.046  45.500  48.362  1.00 43.51
ATOM    480  CB  LYS A  63     -15.818  46.830  47.428  1.00 40.46
ATOM    481  CG  LYS A  63     -14.789  46.959  46.321  1.00 20.53
ATOM    482  CD  LYS A  63     -15.367  47.555  45.054  1.00 28.36
ATOM    483  CE  LYS A  63     -14.315  48.158  44.139  1.00 40.61
ATOM    484  NZ  LYS A  63     -14.588  47.938  42.711  1.00 54.71
ATOM    485  N   VAL A  64     -14.862  44.116  48.441  1.00 45.57
ATOM    486  CA  VAL A  64     -14.190  42.844  48.171  1.00 44.90
ATOM    487  C   VAL A  64     -14.666  42.263  46.841  1.00 46.44
ATOM    488  O   VAL A  64     -15.826  41.917  46.700  1.00 45.81
ATOM    489  CB  VAL A  64     -14.505  41.748  49.192  1.00 46.24
ATOM    490  CG1 VAL A  64     -13.864  40.471  48.669  1.00 44.81
ATOM    491  CG2 VAL A  64     -14.040  42.048  50.627  1.00 44.77
ATOM    492  N   VAL A  65     -13.793  42.099  45.875  1.00 43.10
ATOM    493  CA  VAL A  65     -14.240  41.537  44.604  1.00 41.42
ATOM    494  C   VAL A  65     -13.707  40.156  44.282  1.00 42.13
ATOM    495  O   VAL A  65     -12.605  39.787  44.660  1.00 42.64
ATOM    496  CB  VAL A  65     -13.856  42.462  43.484  1.00 44.58
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ATOM    497  CG1 VAL A  65     -14.520  42.037  42.189  1.00 42.79
ATOM    498  CG2 VAL A  65     -14.264  43.874  43.883  1.00 45.05
ATOM    499  N   ILE A  66     -14.515  39.402  43.556  1.00 38.68
ATOM    500  CA  ILE A  66     -14.179  38.053  43.113  1.00 39.98
ATOM    501  C   ILE A  66     -14.899  37.774  41.802  1.00 44.86
ATOM    502  O   ILE A  66     -16.136  37.735  41.729  1.00 42.69
ATOM    503  CB  ILE A  66     -14.520  36.947  44.113  1.00 44.28
ATOM    504  CG1 ILE A  66     -13.813  37.127  45.445  1.00 47.27
ATOM    505  CG2 ILE A  66     -14.141  35.578  43.550  1.00 42.84
ATOM    506  CD1 ILE A  66     -14.352  36.169  46.514  1.00 38.79
ATOM    507  N   ASN A  67     -14.120  37.549  40.759  1.00 42.94
ATOM    508  CA  ASN A  67     -14.715  37.266  39.472  1.00 44.24
ATOM    509  C   ASN A  67     -15.541  38.444  39.008  1.00 54.25
ATOM    510  O   ASN A  67     -16.743  38.344  38.768  1.00 57.56
ATOM    511  CB  ASN A  67     -15.595  36.007  39.507  1.00 40.72
ATOM    512  CG  ASN A  67     -14.788  34.759  39.745  1.00 57.39
ATOM    513  OD1 ASN A  67     -13.581  34.711  39.454  1.00 52.63
ATOM    514  ND2 ASN A  67     -15.446  33.760  40.317  1.00 44.54
ATOM    515  N   GLY A  68     -14.876  39.574  38.899  1.00 50.43
ATOM    516  CA  GLY A  68     -15.517  40.796  38.462  1.00 48.89
ATOM    517  C   GLY A  68     -16.807  41.115  39.194  1.00 48.77
ATOM    518  O   GLY A  68     -17.523  42.018  38.803  1.00 51.39
ATOM    519  N   GLN A  69     -17.129  40.385  40.244  1.00 40.06
ATOM    520  CA  GLN A  69     -18.348  40.716  40.928  1.00 40.02
ATOM    521  C   GLN A  69     -18.031  41.059  42.364  1.00 50.45
ATOM    522  O   GLN A  69     -16.943  40.748  42.855  1.00 50.53
ATOM    523  CB  GLN A  69     -19.415  39.602  40.829  1.00 40.78
ATOM    524  CG  GLN A  69     -19.966  39.367  39.414  1.00 23.77
ATOM    525  CD  GLN A  69     -20.513  40.646  38.831  1.00 56.53
ATOM    526  OE1 GLN A  69     -19.974  41.198  37.859  1.00 55.28
ATOM    527  NE2 GLN A  69     -21.588  41.134  39.437  1.00 62.26
ATOM    528  N   GLU A  70     -18.975  41.718  43.028  1.00 49.43
ATOM    529  CA  GLU A  70     -18.766  42.094  44.407  1.00 50.67
ATOM    530  C   GLU A  70     -19.296  40.996  45.288  1.00 57.90
ATOM    531  O   GLU A  70     -20.272  40.367  44.909  1.00 63.90
ATOM    532  CB  GLU A  70     -19.449  43.434  44.732  1.00 52.26
ATOM    533  CG  GLU A  70     -18.824  44.624  43.970  1.00 64.80
ATOM    534  CD  GLU A  70     -19.181  45.967  44.555  1.00 91.82
ATOM    535  OE1 GLU A  70     -19.749  46.108  45.629  1.00100.00
ATOM    536  OE2 GLU A  70     -18.814  46.963  43.785  1.00 76.01
ATOM    537  N   VAL A  71     -18.655  40.742  46.433  1.00 47.28
ATOM    538  CA  VAL A  71     -19.119  39.685  47.335  1.00 43.84
ATOM    539  C   VAL A  71     -19.434  40.153  48.768  1.00 41.62
ATOM    540  O   VAL A  71     -18.983  41.206  49.254  1.00 35.70
ATOM    541  CB  VAL A  71     -18.308  38.361  47.273  1.00 46.05
ATOM    542  CG1 VAL A  71     -18.062  37.923  45.827  1.00 45.19
ATOM    543  CG2 VAL A  71     -16.979  38.460  48.017  1.00 45.24
ATOM    544  N   LYS A  72     -20.239  39.343  49.431  1.00 39.34
ATOM    545  CA  LYS A  72     -20.610  39.594  50.792  1.00 42.40
ATOM    546  C   LYS A  72     -19.347  39.466  51.668  1.00 56.92
ATOM    547  O   LYS A  72     -18.399  38.729  51.334  1.00 59.27
ATOM    548  CB  LYS A  72     -21.719  38.629  51.211  1.00 45.76
ATOM    549  CG  LYS A  72     -22.378  38.960  52.557  1.00 86.98
ATOM    550  CD  LYS A  72     -23.898  38.767  52.606  1.00100.00
ATOM    551  CE  LYS A  72     -24.656  40.012  53.077  1.00100.00
ATOM    552  NZ  LYS A  72     -26.011  39.730  53.592  1.00100.00
ATOM    553  N   TYR A  73     -19.332  40.210  52.780  1.00 55.45
ATOM    554  CA  TYR A  73     -18.236  40.226  53.747  1.00 53.31
ATOM    555  C   TYR A  73     -18.636  40.884  55.068  1.00 50.87
ATOM    556  O   TYR A  73     -19.552  41.703  55.139  1.00 47.82
ATOM    557  CB  TYR A  73     -16.891  40.741  53.214  1.00 52.73
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ATOM    558  CG  TYR A  73     -16.765  42.244  53.227  1.00 51.76
ATOM    559  CD1 TYR A  73     -16.539  42.946  54.416  1.00 52.82
ATOM    560  CD2 TYR A  73     -16.927  42.967  52.039  1.00 53.30
ATOM    561  CE1 TYR A  73     -16.439  44.340  54.422  1.00 52.71
ATOM    562  CE2 TYR A  73     -16.804  44.359  52.026  1.00 55.39
ATOM    563  CZ  TYR A  73     -16.592  45.044  53.229  1.00 63.45
ATOM    564  OH  TYR A  73     -16.471  46.404  53.215  1.00 69.53
ATOM    565  N   ALA A  74     -17.927  40.494  56.112  1.00 45.37
ATOM    566  CA  ALA A  74     -18.180  40.999  57.433  1.00 42.62
ATOM    567  C   ALA A  74     -16.892  41.265  58.222  1.00 47.81
ATOM    568  O   ALA A  74     -15.894  40.554  58.133  1.00 45.50
ATOM    569  CB  ALA A  74     -19.111  40.035  58.170  1.00 40.75
ATOM    570  N   LEU A  75     -16.930  42.323  59.005  1.00 49.02
ATOM    571  CA  LEU A  75     -15.829  42.693  59.869  1.00 48.85
ATOM    572  C   LEU A  75     -16.319  42.464  61.281  1.00 47.18
ATOM    573  O   LEU A  75     -17.309  43.021  61.687  1.00 44.35
ATOM    574  CB  LEU A  75     -15.332  44.136  59.675  1.00 49.64
ATOM    575  CG  LEU A  75     -14.789  44.357  58.270  1.00 58.09
ATOM    576  CD1 LEU A  75     -14.524  45.841  58.023  1.00 61.34
ATOM    577  CD2 LEU A  75     -13.512  43.565  58.069  1.00 62.34
ATOM    578  N   GLY A  76     -15.647  41.592  62.004  1.00 47.67
ATOM    579  CA  GLY A  76     -16.034  41.281  63.359  1.00 46.79
ATOM    580  C   GLY A  76     -15.495  42.337  64.279  1.00 47.74
ATOM    581  O   GLY A  76     -14.656  43.171  63.882  1.00 42.87
ATOM    582  N   GLU A  77     -15.988  42.311  65.502  1.00 48.32
ATOM    583  CA  GLU A  77     -15.526  43.300  66.431  1.00 52.14
ATOM    584  C   GLU A  77     -14.029  43.195  66.679  1.00 56.71
ATOM    585  O   GLU A  77     -13.418  42.120  66.591  1.00 55.78
ATOM    586  CB  GLU A  77     -16.357  43.341  67.732  1.00 55.55
ATOM    587  CG  GLU A  77     -17.198  42.063  67.969  1.00 79.57
ATOM    588  CD  GLU A  77     -17.440  41.739  69.427  1.00100.00
ATOM    589  OE1 GLU A  77     -16.537  41.435  70.211  1.00100.00
ATOM    590  OE2 GLU A  77     -18.712  41.799  69.770  1.00100.00
ATOM    591  N   ARG A  78     -13.452  44.344  67.000  1.00 54.17
ATOM    592  CA  ARG A  78     -12.041  44.433  67.298  1.00 53.38
ATOM    593  C   ARG A  78     -11.627  43.656  68.579  1.00 58.88
ATOM    594  O   ARG A  78     -12.247  43.767  69.635  1.00 61.35
ATOM    595  CB  ARG A  78     -11.571  45.891  67.367  1.00 41.96
ATOM    596  CG  ARG A  78     -10.050  46.006  67.326  1.00 38.20
ATOM    597  CD  ARG A  78      -9.537  47.411  67.551  1.00 44.73
ATOM    598  NE  ARG A  78      -8.294  47.648  66.842  1.00 66.47
ATOM    599  CZ  ARG A  78      -7.250  48.247  67.389  1.00 97.61
ATOM    600  NH1 ARG A  78      -7.276  48.692  68.645  1.00100.00
ATOM    601  NH2 ARG A  78      -6.151  48.413  66.663  1.00 80.10
ATOM    602  N   GLN A  79     -10.557  42.857  68.463  1.00 49.54
ATOM    603  CA  GLN A  79      -9.995  42.115  69.566  1.00 47.71
ATOM    604  C   GLN A  79      -8.664  42.789  69.865  1.00 49.77
ATOM    605  O   GLN A  79      -7.626  42.421  69.333  1.00 52.63
ATOM    606  CB  GLN A  79      -9.803  40.613  69.240  1.00 49.05
ATOM    607  CG  GLN A  79     -11.109  39.794  69.339  1.00 57.32
ATOM    608  CD  GLN A  79     -11.043  38.435  68.656  1.00 69.51
ATOM    609  OE1 GLN A  79     -10.400  37.480  69.152  1.00 49.72
ATOM    610  NE2 GLN A  79     -11.727  38.340  67.517  1.00 62.60
ATOM    611  N   SER A  80      -8.699  43.826  70.683  1.00 41.74
ATOM    612  CA  SER A  80      -7.490  44.543  71.022  1.00 37.90
ATOM    613  C   SER A  80      -6.437  44.559  69.920  1.00 35.98
ATOM    614  O   SER A  80      -6.736  44.939  68.801  1.00 34.52
ATOM    615  CB  SER A  80      -6.910  44.144  72.372  1.00 39.07
ATOM    616  OG  SER A  80      -7.255  42.803  72.684  1.00 61.32
ATOM    617  N   TYR A  81      -5.206  44.154  70.289  1.00 29.92
ATOM    618  CA  TYR A  81      -4.027  44.114  69.430  1.00 26.45
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SUBSTITUTE SHEET (RULE 26)

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ATOM    619  C   TYR A  81      -4.163  43.116  68.285  1.00 30.82
ATOM    620  O   TYR A  81      -3.480  43.215  67.269  1.00 34.48
ATOM    621  CB  TYR A  81      -2.727  43.893  70.257  1.00 25.19
ATOM    622  CG  TYR A  81      -2.713  42.491  70.839  1.00 24.57
ATOM    623  CD1 TYR A  81      -3.327  42.247  72.066  1.00 27.27
ATOM    624  CD2 TYR A  81      -2.165  41.410  70.148  1.00 21.82
ATOM    625  CE1 TYR A  81      -3.380  40.975  72.632  1.00 26.49
ATOM    626  CE2 TYR A  81      -2.230  40.122  70.682  1.00 23.48
ATOM    627  CZ  TYR A  81      -2.827  39.908  71.930  1.00 38.28
ATOM    628  OH  TYR A  81      -2.889  38.653  72.493  1.00 42.17
ATOM    629  N   LYS A  82      -5.038  42.136  68.415  1.00 26.97
ATOM    630  CA  LYS A  82      -5.170  41.229  67.293  1.00 27.99
ATOM    631  C   LYS A  82      -5.867  41.898  66.072  1.00 38.90
ATOM    632  O   LYS A  82      -5.614  41.541  64.900  1.00 37.15
ATOM    633  CB  LYS A  82      -5.785  39.918  67.708  1.00 27.59
ATOM    634  CG  LYS A  82      -5.169  39.451  69.008  1.00 39.68
ATOM    635  CD  LYS A  82      -5.435  37.993  69.350  1.00 46.78
ATOM    636  CE  LYS A  82      -6.414  37.819  70.492  1.00 59.84
ATOM    637  NZ  LYS A  82      -7.097  36.523  70.452  1.00 63.48
ATOM    638  N   GLY A  83      -6.738  42.894  66.367  1.00 35.64
ATOM    639  CA  GLY A  83      -7.512  43.620  65.368  1.00 33.65
ATOM    640  C   GLY A  83      -8.866  42.925  65.111  1.00 32.95
ATOM    641  O   GLY A  83      -9.297  42.063  65.870  1.00 28.28
ATOM    642  N   SER A  84      -9.535  43.300  64.026  1.00 34.51
ATOM    643  CA  SER A  84     -10.839  42.742  63.673  1.00 36.13
ATOM    644  C   SER A  84     -10.796  41.724  62.549  1.00 40.65
ATOM    645  O   SER A  84     -10.173  41.893  61.501  1.00 39.77
ATOM    646  CB  SER A  84     -11.883  43.808  63.383  1.00 37.68
ATOM    647  OG  SER A  84     -11.812  44.832  64.352  1.00 45.14
ATOM    648  N   PRO A  85     -11.491  40.656  62.791  1.00 37.01
ATOM    649  CA  PRO A  85     -11.573  39.559  61.863  1.00 34.91
ATOM    650  C   PRO A  85     -12.459  39.946  60.712  1.00 35.92
ATOM    651  O   PRO A  85     -13.514  40.522  60.941  1.00 35.30
ATOM    652  CB  PRO A  85     -12.227  38.406  62.647  1.00 37.00
ATOM    653  CG  PRO A  85     -12.714  38.981  63.974  1.00 44.97
ATOM    654  CD  PRO A  85     -12.325  40.462  64.004  1.00 40.72
ATOM    655  N   MET A  86     -12.018  39.642  59.487  1.00 30.47
ATOM    656  CA  MET A  86     -12.756  39.960  58.275  1.00 28.55
ATOM    657  C   MET A  86     -13.165  38.683  57.552  1.00 40.49
ATOM    658  O   MET A  86     -12.338  38.015  56.954  1.00 39.69
ATOM    659  CB  MET A  86     -11.921  40.829  57.337  1.00 29.51
ATOM    660  CG  MET A  86     -12.750  41.242  56.136  1.00 37.40
ATOM    661  SD  MET A  86     -11.816  41.878  54.701  1.00 47.84
ATOM    662  CE  MET A  86     -13.244  42.527  53.805  1.00 46.52
ATOM    663  N   GLU A  87     -14.441  38.324  57.610  1.00 44.34
ATOM    664  CA  GLU A  87     -14.912  37.107  56.950  1.00 47.21
ATOM    665  C   GLU A  87     -15.495  37.352  55.560  1.00 51.53
ATOM    666  O   GLU A  87     -16.425  38.129  55.424  1.00 53.92
ATOM    667  CB  GLU A  87     -15.942  36.390  57.813  1.00 49.46
ATOM    668  CG  GLU A  87     -16.144  34.937  57.389  1.00 56.39
ATOM    669  CD  GLU A  87     -17.300  34.316  58.104  1.00 80.78
ATOM    670  OE1 GLU A  87     -18.439  34.738  57.994  1.00 86.69
ATOM    671  OE2 GLU A  87     -16.943  33.301  58.868  1.00 68.69
ATOM    672  N   ILE A  88     -14.942  36.659  54.544  1.00 43.84
ATOM    673  CA  ILE A  88     -15.332  36.765  53.145  1.00 40.15
ATOM    674  C   ILE A  88     -16.145  35.610  52.613  1.00 46.72
ATOM    675  O   ILE A  88     -15.725  34.460  52.656  1.00 48.10
ATOM    676  CB  ILE A  88     -14.107  36.891  52.292  1.00 39.13
ATOM    677  CG1 ILE A  88     -13.328  38.146  52.696  1.00 38.40
ATOM    678  CG2 ILE A  88     -14.538  36.932  50.839  1.00 28.13
ATOM    679  CD1 ILE A  88     -11.944  38.200  52.051  1.00 30.07
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ATOM    680  N   SER A  89     -17.314  35.931  52.077  1.00 45.16
ATOM    681  CA  SER A  89     -18.181  34.893  51.559  1.00 44.76
ATOM    682  C   SER A  89     -17.902  34.531  50.131  1.00 46.01
ATOM    683  O   SER A  89     -18.048  35.347  49.243  1.00 44.34
ATOM    684  CB  SER A  89     -19.657  35.121  51.827  1.00 51.87
ATOM    685  OG  SER A  89     -19.942  34.834  53.198  1.00 69.07
ATOM    686  N   LEU A  90     -17.494  33.279  49.914  1.00 46.43
ATOM    687  CA  LEU A  90     -17.204  32.804  48.575  1.00 46.93
ATOM    688  C   LEU A  90     -18.450  32.235  47.935  1.00 55.26
ATOM    689  O   LEU A  90     -19.210  31.476  48.556  1.00 54.94
ATOM    690  CB  LEU A  90     -16.080  31.750  48.521  1.00 46.14
ATOM    691  CG  LEU A  90     -15.262  31.607  49.792  1.00 50.78
ATOM    692  CD1 LEU A  90     -14.546  30.261  49.806  1.00 50.27
ATOM    693  CD2 LEU A  90     -14.219  32.708  49.863  1.00 55.52
ATOM    694  N   PRO A  91     -18.626  32.607  46.683  1.00 54.81
ATOM    695  CA  PRO A  91     -19.756  32.183  45.870  1.00 58.45
ATOM    696  C   PRO A  91     -19.585  30.782  45.254  1.00 67.78
ATOM    697  O   PRO A  91     -20.500  30.250  44.623  1.00 68.64
ATOM    698  CB  PRO A  91     -19.843  33.213  44.738  1.00 59.70
ATOM    699  CG  PRO A  91     -18.503  33.952  44.711  1.00 61.25
ATOM    700  CD  PRO A  91     -17.731  33.539  45.961  1.00 54.16
ATOM    701  N   ILE A  92     -18.413  30.177  45.416  1.00 64.82
ATOM    702  CA  ILE A  92     -18.210  28.863  44.850  1.00 65.03
ATOM    703  C   ILE A  92     -17.485  27.948  45.801  1.00 66.34
ATOM    704  O   ILE A  92     -16.258  27.984  45.865  1.00 70.20
ATOM    705  CB  ILE A  92     -17.433  28.927  43.547  1.00 69.56
ATOM    706  CG1 ILE A  92     -18.298  29.495  42.430  1.00 70.02
ATOM    707  CG2 ILE A  92     -16.975  27.517  43.171  1.00 71.86
ATOM    708  CD1 ILE A  92     -17.528  29.672  41.121  1.00 80.63
ATOM    709  N   ALA A  93     -18.219  27.115  46.534  1.00 54.40
ATOM    710  CA  ALA A  93     -17.526  26.247  47.452  1.00 51.74
ATOM    711  C   ALA A  93     -16.265  25.750  46.804  1.00 52.66
ATOM    712  O   ALA A  93     -16.288  25.319  45.662  1.00 49.87
ATOM    713  CB  ALA A  93     -18.367  25.101  47.968  1.00 52.76
ATOM    714  N   LEU A  94     -15.162  25.861  47.544  1.00 48.18
ATOM    715  CA  LEU A  94     -13.862  25.425  47.067  1.00 43.27
ATOM    716  C   LEU A  94     -13.566  24.066  47.581  1.00 43.98
ATOM    717  O   LEU A  94     -14.086  23.633  48.601  1.00 44.63
ATOM    718  CB  LEU A  94     -12.713  26.344  47.509  1.00 41.05
ATOM    719  CG  LEU A  94     -12.685  27.638  46.739  1.00 40.03
ATOM    720  CD1 LEU A  94     -11.272  28.200  46.751  1.00 36.88
ATOM    721  CD2 LEU A  94     -13.115  27.343  45.311  1.00 44.98
ATOM    722  N   SER A  95     -12.706  23.406  46.875  1.00 43.26
ATOM    723  CA  SER A  95     -12.321  22.074  47.256  1.00 43.76
ATOM    724  C   SER A  95     -10.807  21.991  47.344  1.00 38.58
ATOM    725  O   SER A  95     -10.087  22.944  46.975  1.00 36.78
ATOM    726  CB  SER A  95     -12.902  21.092  46.256  1.00 51.55
ATOM    727  OG  SER A  95     -14.299  21.305  46.156  1.00 62.74
ATOM    728  N   LYS A  96     -10.321  20.863  47.830  1.00 31.10
ATOM    729  CA  LYS A  96      -8.883  20.723  47.958  1.00 34.92
ATOM    730  C   LYS A  96      -8.058  21.238  46.777  1.00 45.63
ATOM    731  O   LYS A  96      -8.400  21.063  45.612  1.00 49.35
ATOM    732  CB  LYS A  96      -8.401  19.366  48.451  1.00 38.53
ATOM    733  CG  LYS A  96      -9.189  18.871  49.651  1.00 68.97
ATOM    734  CD  LYS A  96      -8.691  17.549  50.221  1.00 80.86
ATOM    735  CE  LYS A  96      -9.596  17.011  51.330  1.00 92.53
ATOM    736  NZ  LYS A  96      -9.049  15.833  52.029  1.00100.00
ATOM    737  N   ASN A  97      -6.944  21.873  47.108  1.00 41.92
ATOM    738  CA  ASN A  97      -6.009  22.403  46.139  1.00 40.91
ATOM    739  C   ASN A  97      -6.606  23.348  45.088  1.00 42.64
ATOM    740  O   ASN A  97      -5.963  23.681  44.068  1.00 38.69
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ATOM    741  CB  ASN A  97      -5.084  21.304  45.583  1.00 28.16
ATOM    742  CG  ASN A  97      -4.327  20.568  46.677  1.00 52.21
ATOM    743  OD1 ASN A  97      -3.089  20.627  46.744  1.00 55.30
ATOM    744  ND2 ASN A  97      -5.060  19.858  47.533  1.00 53.87
ATOM    745  N   GLN A  98      -7.833  23.791  45.382  1.00 36.59
ATOM    746  CA  GLN A  98      -8.557  24.718  44.536  1.00 38.44
ATOM    747  C   GLN A  98      -8.288  26.181  44.951  1.00 43.30
ATOM    748  O   GLN A  98      -8.248  26.526  46.138  1.00 43.40
ATOM    749  CB  GLN A  98     -10.064  24.395  44.575  1.00 42.26
ATOM    750  CG  GLN A  98     -10.553  23.538  43.385  1.00 68.24
ATOM    751  CD  GLN A  98     -12.008  23.778  43.010  1.00 95.57
ATOM    752  OE1 GLN A  98     -12.890  22.935  43.278  1.00 86.92
ATOM    753  NE2 GLN A  98     -12.271  24.935  42.393  1.00 95.48
ATOM    754  N   GLU A  99      -8.089  27.062  43.973  1.00 39.70
ATOM    755  CA  GLU A  99      -7.817  28.468  44.280  1.00 40.49
ATOM    756  C   GLU A  99      -8.750  29.536  43.683  1.00 47.84
ATOM    757  O   GLU A  99      -9.330  29.394  42.606  1.00 46.85
ATOM    758  CB  GLU A  99      -6.361  28.866  43.951  1.00 40.24
ATOM    759  CG  GLU A  99      -5.608  27.861  43.080  1.00 44.16
ATOM    760  CD  GLU A  99      -4.120  28.119  42.990  1.00 65.64
ATOM    761  OE1 GLU A  99      -3.636  29.062  42.376  1.00 73.95
ATOM    762  OE2 GLU A  99      -3.395  27.210  43.614  1.00 55.99
ATOM    763  N   ILE A 100      -8.848  30.643  44.418  1.00 43.55
ATOM    764  CA  ILE A 100      -9.595  31.800  44.005  1.00 43.46
ATOM    765  C   ILE A 100      -8.701  32.992  44.238  1.00 53.31
ATOM    766  O   ILE A 100      -7.725  32.927  45.004  1.00 55.16
ATOM    767  CB  ILE A 100     -10.881  32.068  44.773  1.00 46.65
ATOM    768  CG1 ILE A 100     -10.762  31.640  46.227  1.00 50.76
ATOM    769  CG2 ILE A 100     -12.111  31.486  44.106  1.00 46.76
ATOM    770  CD1 ILE A 100      -9.959  32.620  47.087  1.00 64.36
ATOM    771  N   VAL A 101      -9.060  34.076  43.580  1.00 48.20
ATOM    772  CA  VAL A 101      -8.382  35.329  43.760  1.00 45.63
ATOM    773  C   VAL A 101      -9.383  36.351  44.295  1.00 48.59
ATOM    774  O   VAL A 101     -10.331  36.722  43.623  1.00 51.29
ATOM    775  CB  VAL A 101      -7.461  35.793  42.633  1.00 45.06
ATOM    776  CG1 VAL A 101      -7.693  35.000  41.378  1.00 43.25
ATOM    777  CG2 VAL A 101      -7.609  37.289  42.395  1.00 45.02
ATOM    778  N   ILE A 102      -9.182  36.738  45.546  1.00 41.15
ATOM    779  CA  ILE A 102     -10.023  37.690  46.238  1.00 39.43
ATOM    780  C   ILE A 102      -9.439  39.062  46.170  1.00 49.35
ATOM    781  O   ILE A 102      -8.331  39.274  46.659  1.00 53.80
ATOM    782  CB  ILE A 102     -10.097  37.319  47.694  1.00 39.19
ATOM    783  CG1 ILE A 102     -10.180  35.800  47.809  1.00 35.28
ATOM    784  CG2 ILE A 102     -11.300  37.992  48.341  1.00 35.25
ATOM    785  CD1 ILE A 102     -10.962  35.392  49.044  1.00 47.09
ATOM    786  N   GLU A 103     -10.192  39.984  45.572  1.00 43.20
ATOM    787  CA  GLU A 103      -9.748  41.362  45.433  1.00 39.88
ATOM    788  C   GLU A 103     -10.378  42.299  46.425  1.00 44.03
ATOM    789  O   GLU A 103     -11.580  42.558  46.385  1.00 41.34
ATOM    790  CB  GLU A 103      -9.950  41.930  44.047  1.00 39.11
ATOM    791  CG  GLU A 103      -9.017  43.112  43.863  1.00 36.18
ATOM    792  CD  GLU A 103      -9.150  43.666  42.485  1.00 61.93
ATOM    793  OE1 GLU A 103     -10.157  44.234  42.100  1.00 69.89
ATOM    794  OE2 GLU A 103      -8.087  43.457  41.744  1.00 76.18
ATOM    795  N   ILE A 104      -9.534  42.797  47.322  1.00 42.69
ATOM    796  CA  ILE A 104      -9.969  43.718  48.346  1.00 40.72
ATOM    797  C   ILE A 104      -9.522  45.167  48.099  1.00 46.21
ATOM    798  O   ILE A 104      -8.346  45.478  47.866  1.00 42.68
ATOM    799  CB  ILE A 104      -9.578  43.283  49.754  1.00 41.75
ATOM    800  CG1 ILE A 104     -10.006  41.855  50.032  1.00 39.85
ATOM    801  CG2 ILE A 104     -10.225  44.222  50.768  1.00 41.53
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ATOM    802  CD1 ILE A 104      -8.839  40.995  50.485  1.00 34.17
ATOM    803  N   SER A 105     -10.506  46.056  48.173  1.00 47.94
ATOM    804  CA  SER A 105     -10.278  47.481  48.046  1.00 48.05
ATOM    805  C   SER A 105     -10.184  47.977  49.482  1.00 42.39
ATOM    806  O   SER A 105     -11.134  47.879  50.263  1.00 39.69
ATOM    807  CB  SER A 105     -11.399  48.180  47.290  1.00 53.77
ATOM    808  OG  SER A 105     -11.399  47.789  45.930  1.00 60.69
ATOM    809  N   PHE A 106      -9.020  48.445  49.857  1.00 35.07
ATOM    810  CA  PHE A 106      -8.844  48.890  51.223  1.00 34.98
ATOM    811  C   PHE A 106      -8.177  50.238  51.262  1.00 39.26
ATOM    812  O   PHE A 106      -7.607  50.730  50.265  1.00 34.24
ATOM    813  CB  PHE A 106      -8.015  47.864  52.060  1.00 36.05
ATOM    814  CG  PHE A 106      -6.581  47.815  51.556  1.00 37.24
ATOM    815  CD1 PHE A 106      -6.251  47.073  50.422  1.00 39.71
ATOM    816  CD2 PHE A 106      -5.579  48.579  52.161  1.00 36.44
ATOM    817  CE1 PHE A 106      -4.950  47.086  49.920  1.00 41.48
ATOM    818  CE2 PHE A 106      -4.273  48.609  51.672  1.00 38.19
ATOM    819  CZ  PHE A 106      -3.961  47.856  50.540  1.00 37.91
ATOM    820  N   GLU A 107      -8.284  50.794  52.453  1.00 40.64
ATOM    821  CA  GLU A 107      -7.711  52.064  52.848  1.00 43.81
ATOM    822  C   GLU A 107      -7.206  51.869  54.284  1.00 43.82
ATOM    823  O   GLU A 107      -7.933  51.303  55.121  1.00 38.38
ATOM    824  CB  GLU A 107      -8.737  53.234  52.753  1.00 46.93
ATOM    825  CG  GLU A 107      -8.107  54.637  52.467  1.00 67.21
ATOM    826  CD  GLU A 107      -9.086  55.715  52.042  1.00100.00
ATOM    827  OE1 GLU A 107     -10.208  55.504  51.599  1.00100.00
ATOM    828  OE2 GLU A 107      -8.631  56.938  52.221  1.00 93.72
ATOM    829  N   THR A 108      -5.963  52.294  54.551  1.00 39.12
ATOM    830  CA  THR A 108      -5.345  52.175  55.873  1.00 39.69
ATOM    831  C   THR A 108      -5.564  53.427  56.724  1.00 49.82
ATOM    832  O   THR A 108      -5.565  54.552  56.177  1.00 50.94
ATOM    833  CB  THR A 108      -3.810  52.095  55.722  1.00 40.40
ATOM    834  OG1 THR A 108      -3.360  53.226  54.981  1.00 32.22
ATOM    835  CG2 THR A 108      -3.371  50.802  55.042  1.00 46.43
ATOM    836  N   SER A 109      -5.698  53.217  58.065  1.00 42.02
ATOM    837  CA  SER A 109      -5.848  54.294  59.038  1.00 38.13
ATOM    838  C   SER A 109      -4.555  55.101  59.082  1.00 38.47
ATOM    839  O   SER A 109      -3.460  54.583  58.921  1.00 33.60
ATOM    840  CB  SER A 109      -6.166  53.759  60.437  1.00 41.44
ATOM    841  OG  SER A 109      -6.205  54.812  61.404  1.00 47.63
ATOM    842  N   PRO A 110      -4.655  56.392  59.308  1.00 41.64
ATOM    843  CA  PRO A 110      -3.419  57.116  59.393  1.00 40.75
ATOM    844  C   PRO A 110      -2.803  56.749  60.725  1.00 41.47
ATOM    845  O   PRO A 110      -1.676  57.080  61.009  1.00 42.30
ATOM    846  CB  PRO A 110      -3.721  58.605  59.298  1.00 42.09
ATOM    847  CG  PRO A 110      -5.224  58.719  59.132  1.00 48.77
ATOM    848  CD  PRO A 110      -5.811  57.318  59.269  1.00 44.58
ATOM    849  N   LYS A 111      -3.578  56.017  61.518  1.00 36.35
ATOM    850  CA  LYS A 111      -3.167  55.535  62.819  1.00 36.74
ATOM    851  C   LYS A 111      -2.669  54.083  62.720  1.00 40.19
ATOM    852  O   LYS A 111      -2.733  53.319  63.678  1.00 40.53
ATOM    853  CB  LYS A 111      -4.341  55.606  63.807  1.00 41.91
ATOM    854  CG  LYS A 111      -4.362  56.838  64.708  1.00 71.21
ATOM    855  CD  LYS A 111      -5.421  57.854  64.309  1.00 97.95
ATOM    856  CE  LYS A 111      -6.839  57.394  64.611  1.00100.00
ATOM    857  NZ  LYS A 111      -7.853  58.120  63.819  1.00100.00
ATOM    858  N   SER A 112      -2.184  53.670  61.550  1.00 36.84
ATOM    859  CA  SER A 112      -1.714  52.296  61.358  1.00 34.35
ATOM    860  C   SER A 112      -0.518  51.917  62.225  1.00 35.57
ATOM    861  O   SER A 112       0.533  52.548  62.166  1.00 32.49
ATOM    862  CB  SER A 112      -1.449  51.995  59.883  1.00 35.16
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ATOM	863	OG	SER	A	112	-0.682	50.814	59.762	1.00	31.94
ATOM	864	N	SER	A	113	-0.666	50.872	63.033	1.00	31.84
ATOM	865	CA	SER	A	113	0.445	50.460	63.866	1.00	29.27
ATOM	866	C	SER	A	113	1.601	49.927	63.040	1.00	33.37
ATOM	867	O	SER	A	113	2.715	49.792	63.497	1.00	32.95
ATOM	868	CB	SER	A	113	0.052	49.498	64.945	1.00	29.45
ATOM	869	OG	SER	A	113	0.045	48.169	64.462	1.00	34.27
ATOM	870	N	ALA	A	114	1.357	49.628	61.797	1.00	33.69
ATOM	871	CA	ALA	A	114	2.437	49.134	60.981	1.00	34.05
ATOM	872	C	ALA	A	114	3.239	50.287	60.388	1.00	37.83
ATOM	873	O	ALA	A	114	4.411	50.149	60.033	1.00	37.72
ATOM	874	CB	ALA	A	114	1.845	48.292	59.852	1.00	34.51
ATOM	875	N	LEU	A	115	2.580	51.432	60.259	1.00	32.19
ATOM	876	CA	LEU	A	115	3.201	52.595	59.662	1.00	30.48
ATOM	877	C	LEU	A	115	3.509	53.745	60.565	1.00	35.32
ATOM	878	O	LEU	A	115	2.902	54.012	61.604	1.00	35.25
ATOM	879	CB	LEU	A	115	2.358	53.156	58.507	1.00	30.53
ATOM	880	CG	LEU	A	115	1.787	52.064	57.602	1.00	35.51
ATOM	881	CD1	LEU	A	115	0.812	52.710	56.637	1.00	35.12
ATOM	882	CD2	LEU	A	115	2.903	51.387	56.821	1.00	33.88
ATOM	883	N	GLN	A	116	4.490	54.457	60.096	1.00	34.00
ATOM	884	CA	GLN	A	116	4.926	55.656	60.737	1.00	32.52
ATOM	885	C	GLN	A	116	5.066	56.689	59.645	1.00	31.34
ATOM	886	O	GLN	A	116	5.880	56.552	58.729	1.00	28.29
ATOM	887	CB	GLN	A	116	6.232	55.540	61.496	1.00	32.66
ATOM	888	CG	GLN	A	116	6.419	56.813	62.322	1.00	41.25
ATOM	889	CD	GLN	A	116	7.777	56.897	62.952	1.00	50.08
ATOM	890	OE1	GLN	A	116	8.515	55.905	63.017	1.00	55.36
ATOM	891	NE2	GLN	A	116	8.090	58.081	63.438	1.00	38.23
ATOM	892	N	TRP	A	117	4.210	57.680	59.748	1.00	26.66
ATOM	893	CA	TRP	A	117	4.148	58.785	58.827	1.00	26.04
ATOM	894	C	TRP	A	117	4.912	59.978	59.375	1.00	34.56
ATOM	895	O	TRP	A	117	4.467	60.589	60.364	1.00	36.83
ATOM	896	CB	TRP	A	117	2.669	59.188	58.630	1.00	23.15
ATOM	897	CG	TRP	A	117	1.826	58.209	57.863	1.00	23.02
ATOM	898	CD1	TRP	A	117	1.052	57.224	58.397	1.00	26.39
ATOM	899	CD2	TRP	A	117	1.640	58.135	56.433	1.00	21.06
ATOM	900	NE1	TRP	A	117	0.395	56.534	57.393	1.00	26.40
ATOM	901	CE2	TRP	A	117	0.735	57.087	56.184	1.00	27.99
ATOM	902	CE3	TRP	A	117	2.121	58.872	55.361	1.00	20.95
ATOM	903	CZ2	TRP	A	117	0.352	56.753	54.886	1.00	28.21
ATOM	904	CZ3	TRP	A	117	1.750	58.560	54.079	1.00	22.43
ATOM	905	CH2	TRP	A	117	0.872	57.512	53.847	1.00	24.28
ATOM	906	N	LEU	A	118	6.043	60.340	58.756	1.00	31.44
ATOM	907	CA	LEU	A	118	6.745	61.506	59.276	1.00	36.67
ATOM	908	C	LEU	A	118	6.584	62.774	58.432	1.00	46.93
ATOM	909	O	LEU	A	118	6.434	62.705	57.210	1.00	51.17
ATOM	910	CB	LEU	A	118	8.250	61.327	59.577	1.00	38.83
ATOM	911	CG	LEU	A	118	8.881	59.939	59.398	1.00	44.33
ATOM	912	CD1	LEU	A	118	10.392	60.065	59.569	1.00	42.12
ATOM	913	CD2	LEU	A	118	8.351	58.950	60.426	1.00	49.99
ATOM	914	N	THR	A	119	6.524	63.939	59.109	1.00	41.34
ATOM	915	CA	THR	A	119	6.449	65.260	58.468	1.00	38.89
ATOM	916	C	THR	A	119	7.847	65.633	58.034	1.00	40.14
ATOM	917	O	THR	A	119	8.841	65.165	58.605	1.00	44.03
ATOM	918	CB	THR	A	119	5.932	66.300	59.467	1.00	42.63
ATOM	919	OG1	THR	A	119	6.994	66.605	60.362	1.00	50.01
ATOM	920	CG2	THR	A	119	4.769	65.668	60.224	1.00	36.78
ATOM	921	N	PRO	A	120	7.963	66.440	57.020	1.00	33.41
ATOM	922	CA	PRO	A	120	9.275	66.781	56.517	1.00	33.18
ATOM	923	C	PRO	A	120	10.260	67.209	57.599	1.00	38.27

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ATOM    924  O   PRO A 120      11.433  66.829  57.566  1.00 34.42
ATOM    925  CB  PRO A 120       9.068  67.840  55.416  1.00 33.54
ATOM    926  CG  PRO A 120       7.582  67.823  55.097  1.00 34.86
ATOM    927  CD  PRO A 120       6.891  67.180  56.300  1.00 30.86
ATOM    928  N   GLU A 121       9.751  67.982  58.563  1.00 38.03
ATOM    929  CA  GLU A 121      10.534  68.474  59.681  1.00 41.03
ATOM    930  C   GLU A 121      11.212  67.361  60.411  1.00 50.88
ATOM    931  O   GLU A 121      12.279  67.548  60.977  1.00 54.97
ATOM    932  CB  GLU A 121       9.742  69.325  60.699  1.00 43.28
ATOM    933  CG  GLU A 121       8.220  69.071  60.702  1.00 64.72
ATOM    934  CD  GLU A 121       7.398  70.118  59.988  1.00 86.07
ATOM    935  OE1 GLU A 121       7.007  71.131  60.538  1.00100.00
ATOM    936  OE2 GLU A 121       7.108  69.803  58.739  1.00 59.72
ATOM    937  N   GLN A 122      10.569  66.202  60.394  1.00 44.09
ATOM    938  CA  GLN A 122      11.083  65.019  61.041  1.00 40.20
ATOM    939  C   GLN A 122      12.170  64.373  60.232  1.00 47.73
ATOM    940  O   GLN A 122      12.711  63.343  60.643  1.00 53.29
ATOM    941  CB  GLN A 122       9.965  63.992  61.224  1.00 39.31
ATOM    942  CG  GLN A 122       9.057  64.441  62.361  1.00 30.23
ATOM    943  CD  GLN A 122       7.756  63.691  62.438  1.00 38.25
ATOM    944  OE1 GLN A 122       6.899  63.804  61.548  1.00 53.34
ATOM    945  NE2 GLN A 122       7.592  62.938  63.521  1.00 18.98
ATOM    946  N   THR A 123      12.486  64.942  59.074  1.00 38.99
ATOM    947  CA  THR A 123      13.490  64.319  58.229  1.00 36.00
ATOM    948  C   THR A 123      14.755  65.034  58.264  1.00 35.30
ATOM    949  O   THR A 123      14.842  66.074  58.875  1.00 34.95
ATOM    950  CB  THR A 123      13.067  64.145  56.759  1.00 38.25
ATOM    951  OG1 THR A 123      13.144  65.374  56.046  1.00 43.75
ATOM    952  CG2 THR A 123      11.643  63.616  56.725  1.00 40.72
ATOM    953  N   SER A 124      15.699  64.447  57.557  1.00 32.18
ATOM    954  CA  SER A 124      17.025  64.996  57.442  1.00 33.71
ATOM    955  C   SER A 124      17.007  66.216  56.553  1.00 39.04
ATOM    956  O   SER A 124      17.537  67.268  56.883  1.00 39.07
ATOM    957  CB  SER A 124      18.023  63.992  56.859  1.00 37.73
ATOM    958  OG  SER A 124      18.359  62.978  57.796  1.00 36.28
ATOM    959  N   GLY A 125      16.389  66.025  55.414  1.00 38.59
ATOM    960  CA  GLY A 125      16.280  67.034  54.396  1.00 39.90
ATOM    961  C   GLY A 125      15.290  68.094  54.749  1.00 46.83
ATOM    962  O   GLY A 125      15.347  69.171  54.172  1.00 49.78
ATOM    963  N   LYS A 126      14.391  67.788  55.678  1.00 41.09
ATOM    964  CA  LYS A 126      13.396  68.761  56.126  1.00 41.26
ATOM    965  C   LYS A 126      12.498  69.307  55.020  1.00 47.42
ATOM    966  O   LYS A 126      11.617  70.141  55.279  1.00 48.94
ATOM    967  CB  LYS A 126      14.024  69.936  56.894  1.00 41.98
ATOM    968  CG  LYS A 126      15.094  69.555  57.913  1.00 45.84
ATOM    969  CD  LYS A 126      14.535  68.838  59.135  1.00 58.74
ATOM    970  CE  LYS A 126      15.612  68.500  60.151  1.00 72.12
ATOM    971  NZ  LYS A 126      15.395  67.218  60.839  1.00 88.38
ATOM    972  N   GLU A 127      12.722  68.858  53.792  1.00 41.82
ATOM    973  CA  GLU A 127      11.921  69.344  52.708  1.00 41.98
ATOM    974  C   GLU A 127      10.899  68.334  52.239  1.00 45.14
ATOM    975  O   GLU A 127       9.994  68.683  51.496  1.00 46.95
ATOM    976  CB  GLU A 127      12.727  70.015  51.543  1.00 44.39
ATOM    977  CG  GLU A 127      13.198  71.499  51.820  1.00 57.99
ATOM    978  CD  GLU A 127      12.331  72.659  51.301  1.00100.00
ATOM    979  OE1 GLU A 127      11.652  72.611  50.286  1.00100.00
ATOM    980  OE2 GLU A 127      12.387  73.758  52.054  1.00100.00
ATOM    981  N   HIS A 128      11.027  67.077  52.653  1.00 39.18
ATOM    982  CA  HIS A 128      10.068  66.072  52.210  1.00 39.43
ATOM    983  C   HIS A 128       9.636  65.148  53.316  1.00 42.09
ATOM    984  O   HIS A 128      10.366  64.955  54.281  1.00 45.34
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ATOM	985	CB	HIS	A	128	10.628	65.194	51.097	1.00	42.16
ATOM	986	CG	HIS	A	128	10.947	65.936	49.854	1.00	47.24
ATOM	987	ND1	HIS	A	128	9.943	66.423	49.029	1.00	49.12
ATOM	988	CD2	HIS	A	128	12.159	66.262	49.322	1.00	51.13
ATOM	989	CE1	HIS	A	128	10.559	67.031	48.026	1.00	49.97
ATOM	990	NE2	HIS	A	128	11.888	66.953	48.166	1.00	50.87
ATOM	991	N	PRO	A	129	8.447	64.572	53.171	1.00	32.55
ATOM	992	CA	PRO	A	129	7.968	63.650	54.163	1.00	31.15
ATOM	993	C	PRO	A	129	8.636	62.328	53.900	1.00	34.90
ATOM	994	O	PRO	A	129	9.481	62.214	53.021	1.00	35.46
ATOM	995	CB	PRO	A	129	6.466	63.490	53.986	1.00	31.94
ATOM	996	CG	PRO	A	129	6.133	64.104	52.649	1.00	36.83
ATOM	997	CD	PRO	A	129	7.384	64.850	52.185	1.00	32.71
ATOM	998	N	TYR	A	130	8.248	61.342	54.659	1.00	29.47
ATOM	999	CA	TYR	A	130	8.826	60.025	54.548	1.00	29.35
ATOM	1000	C	TYR	A	130	7.856	59.046	55.156	1.00	31.83
ATOM	1001	O	TYR	A	130	7.138	59.375	56.093	1.00	29.84
ATOM	1002	CB	TYR	A	130	10.098	60.029	55.433	1.00	30.54
ATOM	1003	CG	TYR	A	130	11.083	58.886	55.285	1.00	29.76
ATOM	1004	CD1	TYR	A	130	10.845	57.630	55.845	1.00	26.16
ATOM	1005	CD2	TYR	A	130	12.290	59.110	54.619	1.00	30.28
ATOM	1006	CE1	TYR	A	130	11.795	56.621	55.721	1.00	17.87
ATOM	1007	CE2	TYR	A	130	13.253	58.114	54.479	1.00	27.75
ATOM	1008	CZ	TYR	A	130	12.983	56.866	55.031	1.00	25.76
ATOM	1009	OH	TYR	A	130	13.899	55.864	54.894	1.00	40.52
ATOM	1010	N	LEU	A	131	7.832	57.842	54.647	1.00	31.12
ATOM	1011	CA	LEU	A	131	6.994	56.868	55.303	1.00	30.43
ATOM	1012	C	LEU	A	131	7.691	55.568	55.289	1.00	33.91
ATOM	1013	O	LEU	A	131	8.398	55.257	54.397	1.00	33.68
ATOM	1014	CB	LEU	A	131	5.679	56.761	54.530	1.00	26.16
ATOM	1015	CG	LEU	A	131	5.065	55.367	54.600	1.00	21.68
ATOM	1016	CD1	LEU	A	131	4.163	55.206	55.797	1.00	17.56
ATOM	1017	CD2	LEU	A	131	4.222	55.008	53.380	1.00	13.86
ATOM	1018	N	PHE	A	132	7.533	54.828	56.348	1.00	29.24
ATOM	1019	CA	PHE	A	132	8.129	53.527	56.323	1.00	33.44
ATOM	1020	C	PHE	A	132	7.299	52.519	57.157	1.00	41.08
ATOM	1021	O	PHE	A	132	6.344	52.889	57.837	1.00	46.05
ATOM	1022	CB	PHE	A	132	9.621	53.670	56.791	1.00	36.40
ATOM	1023	CG	PHE	A	132	9.763	53.895	58.256	1.00	38.11
ATOM	1024	CD1	PHE	A	132	9.601	52.821	59.053	1.00	37.18
ATOM	1025	CD2	PHE	A	132	10.123	55.158	58.803	1.00	43.89
ATOM	1026	CE1	PHE	A	132	9.771	52.936	60.422	1.00	41.04
ATOM	1027	CE2	PHE	A	132	10.289	55.258	60.174	1.00	47.72
ATOM	1028	CZ	PHE	A	132	10.131	54.143	60.986	1.00	44.34
ATOM	1029	N	SER	A	133	7.612	51.221	57.002	1.00	33.47
ATOM	1030	CA	SER	A	133	6.744	50.228	57.629	1.00	29.86
ATOM	1031	C	SER	A	133	7.499	49.221	58.504	1.00	31.53
ATOM	1032	O	SER	A	133	8.724	49.146	58.531	1.00	33.16
ATOM	1033	CB	SER	A	133	5.942	49.481	56.535	1.00	33.19
ATOM	1034	OG	SER	A	133	6.757	48.480	55.926	1.00	50.66
ATOM	1035	N	GLN	A	134	6.703	48.466	59.294	1.00	24.61
ATOM	1036	CA	GLN	A	134	7.283	47.422	60.134	1.00	22.55
ATOM	1037	C	GLN	A	134	6.268	46.321	60.398	1.00	27.28
ATOM	1038	O	GLN	A	134	5.161	46.566	60.809	1.00	25.09
ATOM	1039	CB	GLN	A	134	7.711	48.041	61.464	1.00	23.29
ATOM	1040	CG	GLN	A	134	8.218	46.987	62.454	1.00	25.96
ATOM	1041	CD	GLN	A	134	9.423	46.290	61.872	1.00	25.65
ATOM	1042	OE1	GLN	A	134	10.296	46.876	61.263	1.00	26.36
ATOM	1043	NE2	GLN	A	134	9.445	44.965	62.095	1.00	21.75
ATOM	1044	N	CYS	A	135	6.435	45.124	59.820	1.00	29.60
ATOM	1045	CA	CYS	A	135	5.291	44.220	59.755	1.00	32.30

ATOM 1046 C CYS A 135 5.442 43.006 60.662 1.00 39.58
ATOM 1047 O CYS A 135 4.597 42.144 60.739 1.00 40.94
ATOM 1048 CB CYS A 135 5.098 43.794 58.320 1.00 35.40
ATOM 1049 SG CYS A 135 3.976 44.922 57.445 1.00 41.22
ATOM 1050 N GLN A 136 6.582 42.949 61.345 1.00 37.37
ATOM 1051 CA GLN A 136 6.715 41.982 62.417 1.00 35.71
ATOM 1052 C GLN A 136 6.589 42.645 63.797 1.00 31.90
ATOM 1053 O GLN A 136 6.878 43.803 63.981 1.00 30.54
ATOM 1054 CB GLN A 136 8.077 41.311 62.295 1.00 37.24
ATOM 1055 CG GLN A 136 8.076 39.878 62.847 1.00 29.70
ATOM 1056 CD GLN A 136 9.483 39.511 63.235 1.00 36.48
ATOM 1057 OE1 GLN A 136 10.366 40.328 63.356 1.00 24.49
ATOM 1058 NE2 GLN A 136 9.665 38.201 63.443 1.00 22.19
ATOM 1059 N ALA A 137 5.850 41.899 64.648 1.00 28.56
ATOM 1060 CA ALA A 137 5.235 40.581 64.351 1.00 28.89
ATOM 1061 C ALA A 137 3.860 40.503 63.630 1.00 31.83
ATOM 1062 O ALA A 137 3.679 39.688 62.738 1.00 29.67
ATOM 1063 CB ALA A 137 5.091 39.742 65.625 1.00 28.91
ATOM 1064 N ILE A 138 2.863 41.285 64.070 1.00 27.07
ATOM 1065 CA ILE A 138 1.553 41.176 63.445 1.00 23.90
ATOM 1066 C ILE A 138 0.960 42.492 63.053 1.00 28.69
ATOM 1067 O ILE A 138 -0.144 42.822 63.426 1.00 31.92
ATOM 1068 CB ILE A 138 0.641 40.357 64.339 1.00 25.41
ATOM 1069 CG1 ILE A 138 0.871 40.811 65.801 1.00 27.32
ATOM 1070 CG2 ILE A 138 1.162 38.938 64.191 1.00 16.34
ATOM 1071 CD1 ILE A 138 -0.275 40.615 66.826 1.00 20.22
ATOM 1072 N HIS A 139 1.718 43.223 62.265 1.00 24.05
ATOM 1073 CA HIS A 139 1.322 44.511 61.824 1.00 24.05
ATOM 1074 C HIS A 139 0.982 44.579 60.351 1.00 34.40
ATOM 1075 O HIS A 139 0.539 45.625 59.888 1.00 35.89
ATOM 1076 CB HIS A 139 2.439 45.519 62.173 1.00 24.63
ATOM 1077 CG HIS A 139 2.689 45.619 63.657 1.00 27.97
ATOM 1078 ND1 HIS A 139 1.679 45.970 64.571 1.00 27.75
ATOM 1079 CD2 HIS A 139 3.835 45.437 64.356 1.00 28.42
ATOM 1080 CE1 HIS A 139 2.222 45.983 65.770 1.00 26.19
ATOM 1081 NE2 HIS A 139 3.517 45.668 65.671 1.00 27.42
ATOM 1082 N CYS A 140 1.181 43.490 59.598 1.00 30.28
ATOM 1083 CA CYS A 140 0.832 43.517 58.181 1.00 28.08
ATOM 1084 C CYS A 140 -0.671 43.765 58.011 1.00 28.98
ATOM 1085 O CYS A 140 -1.111 44.449 57.066 1.00 30.00
ATOM 1086 CB CYS A 140 1.181 42.213 57.447 1.00 28.82
ATOM 1087 SG CYS A 140 1.330 42.483 55.661 1.00 34.37
ATOM 1088 N ARG A 141 -1.440 43.168 58.949 1.00 20.78
ATOM 1089 CA ARG A 141 -2.884 43.252 58.996 1.00 20.33
ATOM 1090 C ARG A 141 -3.286 44.684 59.003 1.00 32.37
ATOM 1091 O ARG A 141 -4.355 45.032 58.510 1.00 35.81
ATOM 1092 CB ARG A 141 -3.557 42.498 60.156 1.00 14.60
ATOM 1093 CG ARG A 141 -3.081 42.891 61.568 1.00 20.94
ATOM 1094 CD ARG A 141 -3.576 41.978 62.715 1.00 19.99
ATOM 1095 NE ARG A 141 -2.911 40.690 62.786 1.00 18.24
ATOM 1096 CZ ARG A 141 -3.140 39.707 63.648 1.00 18.77
ATOM 1097 NH1 ARG A 141 -4.029 39.739 64.634 1.00 20.76
ATOM 1098 NH2 ARG A 141 -2.415 38.640 63.508 1.00 24.20
ATOM 1099 N ALA A 142 -2.408 45.511 59.580 1.00 28.35
ATOM 1100 CA ALA A 142 -2.668 46.940 59.657 1.00 27.60
ATOM 1101 C ALA A 142 -2.369 47.652 58.345 1.00 34.33
ATOM 1102 O ALA A 142 -2.620 48.835 58.203 1.00 34.36
ATOM 1103 CB ALA A 142 -1.994 47.616 60.843 1.00 27.67
ATOM 1104 N ILE A 143 -1.824 46.922 57.382 1.00 32.39
ATOM 1105 CA ILE A 143 -1.537 47.499 56.099 1.00 30.38
ATOM 1106 C ILE A 143 -2.520 46.994 55.067 1.00 37.79

ATOM 1107 O ILE A 143 -2.885 47.709 54.152 1.00 42.65
ATOM 1108 CB ILE A 143 -0.142 47.228 55.613 1.00 32.06
ATOM 1109 CG1 ILE A 143 0.827 48.062 56.414 1.00 31.71
ATOM 1110 CG2 ILE A 143 -0.074 47.654 54.143 1.00 34.02
ATOM 1111 CD1 ILE A 143 2.258 47.774 55.988 1.00 42.10
ATOM 1112 N LEU A 144 -2.939 45.749 55.218 1.00 32.50
ATOM 1113 CA LEU A 144 -3.873 45.142 54.291 1.00 32.36
ATOM 1114 C LEU A 144 -4.435 43.838 54.849 1.00 40.36
ATOM 1115 O LEU A 144 -3.959 43.278 55.852 1.00 33.27
ATOM 1116 CB LEU A 144 -3.250 44.936 52.894 1.00 31.58
ATOM 1117 CG LEU A 144 -1.923 44.170 52.917 1.00 33.31
ATOM 1118 CD1 LEU A 144 -2.147 42.770 52.352 1.00 32.07
ATOM 1119 CD2 LEU A 144 -0.836 44.897 52.110 1.00 28.67
ATOM 1120 N PRO A 145 -5.490 43.347 54.213 1.00 40.02
ATOM 1121 CA PRO A 145 -6.080 42.129 54.715 1.00 37.86
ATOM 1122 C PRO A 145 -5.264 40.941 54.286 1.00 37.87
ATOM 1123 O PRO A 145 -4.819 40.831 53.144 1.00 35.27
ATOM 1124 CB PRO A 145 -7.530 42.080 54.220 1.00 38.81
ATOM 1125 CG PRO A 145 -7.778 43.393 53.492 1.00 41.34
ATOM 1126 CD PRO A 145 -6.432 44.093 53.341 1.00 36.69
ATOM 1127 N CYS A 146 -5.041 40.056 55.233 1.00 36.18
ATOM 1128 CA CYS A 146 -4.250 38.882 54.958 1.00 35.60
ATOM 1129 C CYS A 146 -4.358 37.859 56.069 1.00 33.04
ATOM 1130 O CYS A 146 -5.067 38.062 57.050 1.00 30.78
ATOM 1131 CB CYS A 146 -2.761 39.287 54.813 1.00 36.08
ATOM 1132 SG CYS A 146 -2.087 40.108 56.302 1.00 39.43
ATOM 1133 N GLN A 147 -3.637 36.755 55.883 1.00 29.33
ATOM 1134 CA GLN A 147 -3.517 35.703 56.875 1.00 29.71
ATOM 1135 C GLN A 147 -2.254 36.131 57.628 1.00 38.75
ATOM 1136 O GLN A 147 -1.141 35.926 57.135 1.00 40.79
ATOM 1137 CB GLN A 147 -3.322 34.352 56.206 1.00 28.99
ATOM 1138 CG GLN A 147 -4.672 33.707 55.894 1.00 25.73
ATOM 1139 CD GLN A 147 -4.562 32.532 54.960 1.00 39.92
ATOM 1140 OE1 GLN A 147 -4.217 32.668 53.775 1.00 43.89
ATOM 1141 NE2 GLN A 147 -4.828 31.368 55.499 1.00 26.36
ATOM 1142 N ASP A 148 -2.425 36.834 58.765 1.00 32.68
ATOM 1143 CA ASP A 148 -1.287 37.362 59.474 1.00 33.50
ATOM 1144 C ASP A 148 -0.629 36.377 60.371 1.00 33.13
ATOM 1145 O ASP A 148 -0.622 36.563 61.584 1.00 31.30
ATOM 1146 CB ASP A 148 -1.633 38.642 60.253 1.00 37.78
ATOM 1147 CG ASP A 148 -0.535 39.666 60.332 1.00 45.10
ATOM 1148 OD1 ASP A 148 0.564 39.540 59.836 1.00 47.89
ATOM 1149 OD2 ASP A 148 -0.913 40.737 60.952 1.00 48.63
ATOM 1150 N THR A 149 -0.080 35.345 59.742 1.00 29.15
ATOM 1151 CA THR A 149 0.584 34.251 60.422 1.00 28.25
ATOM 1152 C THR A 149 1.805 33.831 59.625 1.00 34.92
ATOM 1153 O THR A 149 1.757 33.764 58.410 1.00 34.47
ATOM 1154 CB THR A 149 -0.403 33.087 60.674 1.00 24.79
ATOM 1155 OG1 THR A 149 0.241 32.059 61.352 1.00 37.15
ATOM 1156 CG2 THR A 149 -0.905 32.527 59.345 1.00 26.56
ATOM 1157 N PRO A 150 2.910 33.575 60.323 1.00 34.69
ATOM 1158 CA PRO A 150 4.142 33.217 59.659 1.00 31.06
ATOM 1159 C PRO A 150 4.087 31.813 59.131 1.00 36.66
ATOM 1160 O PRO A 150 4.995 31.356 58.450 1.00 36.37
ATOM 1161 CB PRO A 150 5.245 33.327 60.712 1.00 31.18
ATOM 1162 CG PRO A 150 4.570 33.471 62.077 1.00 36.95
ATOM 1163 CD PRO A 150 3.078 33.589 61.823 1.00 34.62
ATOM 1164 N SER A 151 2.992 31.150 59.452 1.00 31.62
ATOM 1165 CA SER A 151 2.778 29.791 59.029 1.00 27.35
ATOM 1166 C SER A 151 2.357 29.738 57.564 1.00 32.97
ATOM 1167 O SER A 151 2.344 28.703 56.928 1.00 34.25

ATOM	1168	CB	SER	A	151	1.714	29.203	59.905	1.00 25.95
ATOM	1169	OG	SER	A	151	0.483	29.685	59.439	1.00 49.35
ATOM	1170	N	VAL	A	152	1.997	30.887	57.024	1.00 34.36
ATOM	1171	CA	VAL	A	152	1.595	31.015	55.623	1.00 33.74
ATOM	1172	C	VAL	A	152	2.705	31.764	54.847	1.00 37.45
ATOM	1173	O	VAL	A	152	3.295	32.761	55.313	1.00 37.63
ATOM	1174	CB	VAL	A	152	0.203	31.697	55.427	1.00 32.61
ATOM	1175	CG1	VAL	A	152	-0.184	31.767	53.963	1.00 31.50
ATOM	1176	CG2	VAL	A	152	-0.915	30.975	56.149	1.00 31.29
ATOM	1177	N	LYS	A	153	2.999	31.289	53.654	1.00 26.98
ATOM	1178	CA	LYS	A	153	4.002	31.927	52.866	1.00 25.81
ATOM	1179	C	LYS	A	153	3.469	32.141	51.473	1.00 33.94
ATOM	1180	O	LYS	A	153	2.826	31.251	50.936	1.00 32.91
ATOM	1181	CB	LYS	A	153	5.252	31.091	52.841	1.00 24.70
ATOM	1182	CG	LYS	A	153	6.383	31.760	53.583	1.00 34.68
ATOM	1183	CD	LYS	A	153	7.641	30.893	53.616	1.00 39.37
ATOM	1184	CE	LYS	A	153	8.121	30.506	55.015	1.00 29.09
ATOM	1185	NZ	LYS	A	153	9.556	30.152	55.112	1.00 26.03
ATOM	1186	N	LEU	A	154	3.732	33.321	50.896	1.00 32.13
ATOM	1187	CA	LEU	A	154	3.285	33.639	49.544	1.00 30.67
ATOM	1188	C	LEU	A	154	4.279	34.475	48.789	1.00 40.67
ATOM	1189	O	LEU	A	154	5.264	35.000	49.344	1.00 42.56
ATOM	1190	CB	LEU	A	154	1.966	34.432	49.515	1.00 30.10
ATOM	1191	CG	LEU	A	154	2.084	35.793	50.207	1.00 35.20
ATOM	1192	CD1	LEU	A	154	0.989	36.716	49.690	1.00 37.21
ATOM	1193	CD2	LEU	A	154	1.934	35.608	51.715	1.00 33.07
ATOM	1194	N	THR	A	155	3.963	34.610	47.499	1.00 37.82
ATOM	1195	CA	THR	A	155	4.728	35.449	46.596	1.00 38.44
ATOM	1196	C	THR	A	155	3.934	36.730	46.389	1.00 41.52
ATOM	1197	O	THR	A	155	2.738	36.775	46.674	1.00 43.95
ATOM	1198	CB	THR	A	155	5.041	34.814	45.230	1.00 36.99
ATOM	1199	OG1	THR	A	155	3.886	34.281	44.584	1.00 32.59
ATOM	1200	CG2	THR	A	155	6.133	33.790	45.404	1.00 18.24
ATOM	1201	N	TYR	A	156	4.563	37.768	45.892	1.00 33.87
ATOM	1202	CA	TYR	A	156	3.835	39.003	45.683	1.00 32.49
ATOM	1203	C	TYR	A	156	4.509	39.922	44.717	1.00 37.91
ATOM	1204	O	TYR	A	156	5.725	39.940	44.562	1.00 39.04
ATOM	1205	CB	TYR	A	156	3.534	39.795	46.983	1.00 31.16
ATOM	1206	CG	TYR	A	156	4.642	40.731	47.471	1.00 28.94
ATOM	1207	CD1	TYR	A	156	4.817	42.021	46.969	1.00 30.33
ATOM	1208	CD2	TYR	A	156	5.525	40.303	48.465	1.00 30.43
ATOM	1209	CE1	TYR	A	156	5.829	42.853	47.459	1.00 36.89
ATOM	1210	CE2	TYR	A	156	6.553	41.104	48.960	1.00 31.47
ATOM	1211	CZ	TYR	A	156	6.690	42.396	48.462	1.00 43.34
ATOM	1212	OH	TYR	A	156	7.701	43.180	48.956	1.00 36.86
ATOM	1213	N	THR	A	157	3.657	40.689	44.101	1.00 36.75
ATOM	1214	CA	THR	A	157	4.036	41.691	43.171	1.00 38.49
ATOM	1215	C	THR	A	157	3.346	42.942	43.611	1.00 42.61
ATOM	1216	O	THR	A	157	2.228	42.913	44.143	1.00 38.45
ATOM	1217	CB	THR	A	157	3.631	41.316	41.751	1.00 39.73
ATOM	1218	OG1	THR	A	157	2.380	40.655	41.803	1.00 55.71
ATOM	1219	CG2	THR	A	157	4.680	40.370	41.212	1.00 26.71
ATOM	1220	N	ALA	A	158	4.037	44.025	43.404	1.00 41.36
ATOM	1221	CA	ALA	A	158	3.488	45.273	43.789	1.00 41.08
ATOM	1222	C	ALA	A	158	3.869	46.401	42.839	1.00 50.77
ATOM	1223	O	ALA	A	158	4.919	46.390	42.179	1.00 53.47
ATOM	1224	CB	ALA	A	158	3.910	45.570	45.212	1.00 39.87
ATOM	1225	N	GLU	A	159	2.974	47.376	42.788	1.00 43.90
ATOM	1226	CA	GLU	A	159	3.107	48.604	42.023	1.00 42.27
ATOM	1227	C	GLU	A	159	2.451	49.705	42.843	1.00 42.17
ATOM	1228	O	GLU	A	159	1.257	49.630	43.227	1.00 41.00

ATOM	3059	N	LEU	A	390	22.374	27.059	71.172	1.00	11.37
ATOM	3060	CA	LEU	A	390	23.140	26.650	69.998	1.00	9.78
ATOM	3061	C	LEU	A	390	24.651	26.539	70.251	1.00	19.70
ATOM	3062	O	LEU	A	390	25.305	25.609	69.745	1.00	18.74
ATOM	3063	CB	LEU	A	390	22.887	27.525	68.764	1.00	9.94
ATOM	3064	CG	LEU	A	390	21.402	27.590	68.367	1.00	14.32
ATOM	3065	CD1	LEU	A	390	21.153	28.632	67.257	1.00	14.04
ATOM	3066	CD2	LEU	A	390	20.902	26.209	67.923	1.00	14.70
ATOM	3067	N	PHE	A	391	25.205	27.490	71.026	1.00	12.66
ATOM	3068	CA	PHE	A	391	26.635	27.538	71.333	1.00	13.86
ATOM	3069	C	PHE	A	391	27.053	26.343	72.147	1.00	17.87
ATOM	3070	O	PHE	A	391	28.104	25.733	71.983	1.00	18.52
ATOM	3071	CB	PHE	A	391	26.964	28.806	72.105	1.00	14.47
ATOM	3072	CG	PHE	A	391	28.437	29.179	72.101	1.00	18.51
ATOM	3073	CD1	PHE	A	391	29.237	28.996	70.973	1.00	18.55
ATOM	3074	CD2	PHE	A	391	29.030	29.748	73.233	1.00	18.59
ATOM	3075	CE1	PHE	A	391	30.571	29.402	70.966	1.00	15.73
ATOM	3076	CE2	PHE	A	391	30.373	30.137	73.252	1.00	18.49
ATOM	3077	CZ	PHE	A	391	31.148	29.954	72.109	1.00	15.63
ATOM	3078	N	TYR	A	392	26.148	26.008	73.039	1.00	16.91
ATOM	3079	CA	TYR	A	392	26.315	24.893	73.944	1.00	17.78
ATOM	3080	C	TYR	A	392	26.288	23.570	73.175	1.00	19.46
ATOM	3081	O	TYR	A	392	27.095	22.666	73.388	1.00	18.21
ATOM	3082	CB	TYR	A	392	25.243	25.000	75.049	1.00	15.50
ATOM	3083	CG	TYR	A	392	24.928	23.688	75.736	1.00	20.94
ATOM	3084	CD1	TYR	A	392	25.849	23.106	76.609	1.00	24.90
ATOM	3085	CD2	TYR	A	392	23.715	23.034	75.528	1.00	21.37
ATOM	3086	CE1	TYR	A	392	25.596	21.899	77.260	1.00	23.89
ATOM	3087	CE2	TYR	A	392	23.438	21.821	76.162	1.00	24.11
ATOM	3088	CZ	TYR	A	392	24.383	21.256	77.020	1.00	28.03
ATOM	3089	OH	TYR	A	392	24.112	20.087	77.665	1.00	20.09
ATOM	3090	N	LEU	A	393	25.332	23.456	72.271	1.00	14.83
ATOM	3091	CA	LEU	A	393	25.210	22.267	71.440	1.00	15.47
ATOM	3092	C	LEU	A	393	26.432	22.122	70.544	1.00	20.32
ATOM	3093	O	LEU	A	393	26.867	21.005	70.304	1.00	21.36
ATOM	3094	CB	LEU	A	393	23.961	22.344	70.508	1.00	16.00
ATOM	3095	CG	LEU	A	393	22.638	22.027	71.223	1.00	18.37
ATOM	3096	CD1	LEU	A	393	21.443	22.392	70.347	1.00	15.16
ATOM	3097	CD2	LEU	A	393	22.577	20.601	71.795	1.00	17.06
ATOM	3098	N	GLU	A	394	26.921	23.255	70.015	1.00	16.00
ATOM	3099	CA	GLU	A	394	28.104	23.298	69.160	1.00	13.58
ATOM	3100	C	GLU	A	394	29.268	22.719	69.931	1.00	17.05
ATOM	3101	O	GLU	A	394	30.014	21.889	69.453	1.00	15.79
ATOM	3102	CB	GLU	A	394	28.434	24.745	68.776	1.00	17.59
ATOM	3103	CG	GLU	A	394	29.903	24.871	68.320	1.00	23.24
ATOM	3104	CD	GLU	A	394	30.332	26.300	68.152	1.00	32.12
ATOM	3105	OE1	GLU	A	394	29.709	27.146	67.532	1.00	23.57
ATOM	3106	OE2	GLU	A	394	31.480	26.547	68.714	1.00	26.27
ATOM	3107	N	GLN	A	395	29.410	23.127	71.183	1.00	16.99
ATOM	3108	CA	GLN	A	395	30.462	22.610	72.030	1.00	17.56
ATOM	3109	C	GLN	A	395	30.293	21.127	72.360	1.00	23.89
ATOM	3110	O	GLN	A	395	31.258	20.359	72.421	1.00	24.66
ATOM	3111	CB	GLN	A	395	30.725	23.461	73.318	1.00	17.71
ATOM	3112	CG	GLN	A	395	31.195	24.888	72.918	1.00	17.45
ATOM	3113	CD	GLN	A	395	31.354	25.851	74.081	1.00	21.98
ATOM	3114	OE1	GLN	A	395	30.986	25.584	75.224	1.00	16.80
ATOM	3115	NE2	GLN	A	395	31.943	26.985	73.776	1.00	16.78
ATOM	3116	N	LEU	A	396	29.058	20.706	72.588	1.00	21.86
ATOM	3117	CA	LEU	A	396	28.767	19.330	72.932	1.00	20.27
ATOM	3118	C	LEU	A	396	28.936	18.387	71.744	1.00	22.03
ATOM	3119	O	LEU	A	396	29.381	17.260	71.857	1.00	25.07
ATOM	3120	CB	LEU	A	396	27.315	19.276	73.441	1.00	18.56
ATOM	3121	CG	LEU	A	396	26.852	17.960	73.994	1.00	22.66
ATOM	3122	CD1	LEU	A	396	27.493	17.780	75.354	1.00	25.52

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ATOM   3123  CD2 LEU A 396      25.340  18.045  74.179  1.00 17.79
ATOM   3124  N   LEU A 397      28.575  18.831  70.579  1.00 15.28
ATOM   3125  CA  LEU A 397      28.603  17.939  69.433  1.00 16.80
ATOM   3126  C   LEU A 397      29.846  17.946  68.565  1.00 26.85
ATOM   3127  O   LEU A 397      29.864  17.399  67.458  1.00 29.08
ATOM   3128  CB  LEU A 397      27.371  18.242  68.552  1.00 15.51
ATOM   3129  CG  LEU A 397      26.013  18.018  69.261  1.00 20.96
ATOM   3130  CD1 LEU A 397      24.874  18.717  68.501  1.00 19.35
ATOM   3131  CD2 LEU A 397      25.692  16.536  69.461  1.00 19.12
ATOM   3132  N   GLY A 398      30.901  18.598  68.985  1.00 24.55
ATOM   3133  CA  GLY A 398      32.006  18.516  68.076  1.00 27.19
ATOM   3134  C   GLY A 398      32.648  19.794  67.598  1.00 29.41
ATOM   3135  O   GLY A 398      33.743  19.713  67.048  1.00 30.13
ATOM   3136  N   GLY A 399      32.020  20.951  67.752  1.00 19.25
ATOM   3137  CA  GLY A 399      32.700  22.143  67.291  1.00 16.50
ATOM   3138  C   GLY A 399      31.937  22.850  66.212  1.00 15.03
ATOM   3139  O   GLY A 399      30.976  22.315  65.694  1.00 17.49
ATOM   3140  N   PRO A 400      32.397  24.045  65.870  1.00 21.52
ATOM   3141  CA  PRO A 400      31.758  24.918  64.909  1.00 21.69
ATOM   3142  C   PRO A 400      31.599  24.312  63.552  1.00 29.85
ATOM   3143  O   PRO A 400      30.540  24.433  62.921  1.00 24.28
ATOM   3144  CB  PRO A 400      32.574  26.210  64.802  1.00 21.33
ATOM   3145  CG  PRO A 400      33.868  25.949  65.552  1.00 27.07
ATOM   3146  CD  PRO A 400      33.698  24.635  66.306  1.00 25.67
ATOM   3147  N   GLU A 401      32.679  23.674  63.128  1.00 28.84
ATOM   3148  CA  GLU A 401      32.630  23.048  61.831  1.00 30.42
ATOM   3149  C   GLU A 401      31.491  22.055  61.764  1.00 22.63
ATOM   3150  O   GLU A 401      30.664  22.034  60.872  1.00 21.35
ATOM   3151  CB  GLU A 401      33.915  22.247  61.648  1.00 35.39
ATOM   3152  CG  GLU A 401      35.125  23.160  61.445  1.00 70.34
ATOM   3153  CD  GLU A 401      35.978  22.574  60.355  1.00100.00
ATOM   3154  OE1 GLU A 401      35.711  21.486  59.851  1.00100.00
ATOM   3155  OE2 GLU A 401      37.013  23.329  60.026  1.00100.00
ATOM   3156  N   ILE A 402      31.484  21.185  62.731  1.00 20.44
ATOM   3157  CA  ILE A 402      30.481  20.165  62.766  1.00 21.27
ATOM   3158  C   ILE A 402      29.082  20.761  62.895  1.00 26.84
ATOM   3159  O   ILE A 402      28.142  20.366  62.199  1.00 18.68
ATOM   3160  CB  ILE A 402      30.819  19.218  63.904  1.00 24.03
ATOM   3161  CG1 ILE A 402      31.974  18.299  63.503  1.00 23.45
ATOM   3162  CG2 ILE A 402      29.587  18.421  64.334  1.00 28.69
ATOM   3163  CD1 ILE A 402      32.370  17.396  64.665  1.00 26.57
ATOM   3164  N   PHE A 403      28.948  21.745  63.773  1.00 21.88
ATOM   3165  CA  PHE A 403      27.646  22.325  63.962  1.00 20.25
ATOM   3166  C   PHE A 403      27.149  23.152  62.802  1.00 20.90
ATOM   3167  O   PHE A 403      25.951  23.246  62.510  1.00 21.88
ATOM   3168  CB  PHE A 403      27.555  23.073  65.298  1.00 22.18
ATOM   3169  CG  PHE A 403      26.121  23.247  65.764  1.00 20.23
ATOM   3170  CD1 PHE A 403      25.411  22.189  66.331  1.00 21.99
ATOM   3171  CD2 PHE A 403      25.478  24.479  65.660  1.00 25.50
ATOM   3172  CE1 PHE A 403      24.106  22.345  66.801  1.00 23.07
ATOM   3173  CE2 PHE A 403      24.156  24.651  66.081  1.00 25.44
ATOM   3174  CZ  PHE A 403      23.472  23.581  66.661  1.00 22.55
ATOM   3175  N   LEU A 404      28.076  23.804  62.121  1.00 17.83
ATOM   3176  CA  LEU A 404      27.664  24.596  60.973  1.00 17.93
ATOM   3177  C   LEU A 404      27.136  23.666  59.868  1.00 24.59
ATOM   3178  O   LEU A 404      26.297  24.031  59.044  1.00 22.86
ATOM   3179  CB  LEU A 404      28.808  25.526  60.504  1.00 17.59
ATOM   3180  CG  LEU A 404      28.952  26.728  61.425  1.00 19.68
ATOM   3181  CD1 LEU A 404      30.297  27.424  61.239  1.00 19.60
ATOM   3182  CD2 LEU A 404      27.873  27.719  61.047  1.00 20.62
ATOM   3183  N   GLY A 405      27.630  22.418  59.852  1.00 21.24
ATOM   3184  CA  GLY A 405      27.164  21.461  58.868  1.00 18.72
ATOM   3185  C   GLY A 405      25.691  21.148  59.148  1.00 23.90
ATOM   3186  O   GLY A 405      24.853  21.054  58.240  1.00 24.54
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ATOM   3187  N   PHE A 406      25.363  20.987  60.438  1.00 18.59
ATOM   3188  CA  PHE A 406      23.979  20.734  60.824  1.00 18.47
ATOM   3189  C   PHE A 406      23.165  21.964  60.367  1.00 23.08
ATOM   3190  O   PHE A 406      22.150  21.917  59.663  1.00 20.15
ATOM   3191  CB  PHE A 406      23.863  20.473  62.348  1.00 17.79
ATOM   3192  CG  PHE A 406      22.470  20.814  62.819  1.00 19.42
ATOM   3193  CD1 PHE A 406      21.400  19.986  62.482  1.00 20.66
ATOM   3194  CD2 PHE A 406      22.213  21.990  63.526  1.00 20.37
ATOM   3195  CE1 PHE A 406      20.099  20.274  62.898  1.00 22.34
ATOM   3196  CE2 PHE A 406      20.921  22.313  63.938  1.00 24.74
ATOM   3197  CZ  PHE A 406      19.874  21.441  63.634  1.00 23.87
ATOM   3198  N   LEU A 407      23.674  23.139  60.702  1.00 22.33
ATOM   3199  CA  LEU A 407      22.979  24.352  60.309  1.00 26.37
ATOM   3200  C   LEU A 407      22.690  24.501  58.819  1.00 24.88
ATOM   3201  O   LEU A 407      21.588  24.869  58.409  1.00 21.77
ATOM   3202  CB  LEU A 407      23.742  25.574  60.831  1.00 30.18
ATOM   3203  CG  LEU A 407      22.859  26.773  61.112  1.00 40.95
ATOM   3204  CD1 LEU A 407      23.559  27.710  62.083  1.00 43.78
ATOM   3205  CD2 LEU A 407      22.622  27.498  59.806  1.00 47.26
ATOM   3206  N   LYS A 408      23.679  24.256  57.981  1.00 21.87
ATOM   3207  CA  LYS A 408      23.425  24.378  56.555  1.00 20.93
ATOM   3208  C   LYS A 408      22.386  23.351  56.080  1.00 19.73
ATOM   3209  O   LYS A 408      21.502  23.596  55.265  1.00 18.85
ATOM   3210  CB  LYS A 408      24.715  24.325  55.746  1.00 22.33
ATOM   3211  CG  LYS A 408      24.420  24.240  54.262  1.00 33.19
ATOM   3212  CD  LYS A 408      25.621  24.508  53.374  1.00 24.21
ATOM   3213  CE  LYS A 408      26.812  25.035  54.131  1.00 44.20
ATOM   3214  NZ  LYS A 408      27.904  25.399  53.217  1.00 61.63
ATOM   3215  N   ALA A 409      22.458  22.161  56.625  1.00 21.49
ATOM   3216  CA  ALA A 409      21.496  21.116  56.278  1.00 23.64
ATOM   3217  C   ALA A 409      20.037  21.458  56.689  1.00 28.20
ATOM   3218  O   ALA A 409      19.059  21.204  55.968  1.00 23.25
ATOM   3219  CB  ALA A 409      21.936  19.821  56.974  1.00 23.41
ATOM   3220  N   TYR A 410      19.921  22.030  57.900  1.00 23.19
ATOM   3221  CA  TYR A 410      18.668  22.463  58.495  1.00 18.98
ATOM   3222  C   TYR A 410      18.014  23.507  57.594  1.00 18.81
ATOM   3223  O   TYR A 410      16.832  23.464  57.298  1.00 19.59
ATOM   3224  CB  TYR A 410      18.973  22.980  59.910  1.00 19.89
ATOM   3225  CG  TYR A 410      17.947  23.924  60.516  1.00 20.57
ATOM   3226  CD1 TYR A 410      16.715  23.463  60.981  1.00 22.20
ATOM   3227  CD2 TYR A 410      18.219  25.286  60.649  1.00 21.16
ATOM   3228  CE1 TYR A 410      15.767  24.320  61.551  1.00 17.85
ATOM   3229  CE2 TYR A 410      17.289  26.163  61.213  1.00 22.58
ATOM   3230  CZ  TYR A 410      16.064  25.679  61.682  1.00 25.33
ATOM   3231  OH  TYR A 410      15.182  26.528  62.315  1.00 20.84
ATOM   3232  N   VAL A 411      18.809  24.459  57.147  1.00 17.01
ATOM   3233  CA  VAL A 411      18.378  25.520  56.254  1.00 20.36
ATOM   3234  C   VAL A 411      17.876  24.946  54.936  1.00 25.04
ATOM   3235  O   VAL A 411      16.859  25.377  54.394  1.00 22.50
ATOM   3236  CB  VAL A 411      19.533  26.493  55.937  1.00 24.82
ATOM   3237  CG1 VAL A 411      19.220  27.380  54.724  1.00 21.10
ATOM   3238  CG2 VAL A 411      19.920  27.333  57.163  1.00 25.82
ATOM   3239  N   GLU A 412      18.616  23.952  54.443  1.00 24.87
ATOM   3240  CA  GLU A 412      18.264  23.283  53.202  1.00 24.91
ATOM   3241  C   GLU A 412      16.960  22.532  53.366  1.00 24.56
ATOM   3242  O   GLU A 412      16.045  22.612  52.555  1.00 26.86
ATOM   3243  CB  GLU A 412      19.330  22.211  52.913  1.00 28.91
ATOM   3244  CG  GLU A 412      20.206  22.405  51.660  1.00 51.34
ATOM   3245  CD  GLU A 412      21.671  22.089  51.908  1.00100.00
ATOM   3246  OE1 GLU A 412      22.243  22.331  52.963  1.00100.00
ATOM   3247  OE2 GLU A 412      22.274  21.541  50.874  1.00100.00
ATOM   3248  N   LYS A 413      16.909  21.757  54.442  1.00 19.78
ATOM   3249  CA  LYS A 413      15.755  20.940  54.747  1.00 15.53
ATOM   3250  C   LYS A 413      14.484  21.718  54.892  1.00 22.00
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ATOM	3251	O	LYS	A	413	13.464	21.272	54.409	1.00 23.41
ATOM	3252	CB	LYS	A	413	16.020	20.156	56.008	1.00 17.04
ATOM	3253	CG	LYS	A	413	14.754	19.602	56.629	1.00 26.97
ATOM	3254	CD	LYS	A	413	14.225	18.351	55.955	1.00 37.17
ATOM	3255	CE	LYS	A	413	13.553	17.352	56.893	1.00 56.50
ATOM	3256	NZ	LYS	A	413	13.126	16.109	56.223	1.00 80.78
ATOM	3257	N	PHE	A	414	14.543	22.888	55.532	1.00 19.76
ATOM	3258	CA	PHE	A	414	13.366	23.700	55.808	1.00 17.00
ATOM	3259	C	PHE	A	414	13.192	24.945	54.985	1.00 21.55
ATOM	3260	O	PHE	A	414	12.329	25.748	55.303	1.00 17.11
ATOM	3261	CB	PHE	A	414	13.219	24.035	57.303	1.00 16.42
ATOM	3262	CG	PHE	A	414	13.047	22.800	58.122	1.00 15.55
ATOM	3263	CD1	PHE	A	414	11.894	22.029	57.979	1.00 19.53
ATOM	3264	CD2	PHE	A	414	14.024	22.368	59.015	1.00 20.06
ATOM	3265	CE1	PHE	A	414	11.709	20.868	58.729	1.00 18.22
ATOM	3266	CE2	PHE	A	414	13.861	21.205	59.771	1.00 21.10
ATOM	3267	CZ	PHE	A	414	12.695	20.456	59.627	1.00 19.80
ATOM	3268	N	SER	A	415	13.972	25.111	53.928	1.00 22.05
ATOM	3269	CA	SER	A	415	13.807	26.273	53.044	1.00 23.12
ATOM	3270	C	SER	A	415	12.380	26.434	52.548	1.00 23.50
ATOM	3271	O	SER	A	415	11.775	25.451	52.138	1.00 22.71
ATOM	3272	CB	SER	A	415	14.763	26.214	51.858	1.00 23.04
ATOM	3273	OG	SER	A	415	16.054	26.591	52.319	1.00 31.15
ATOM	3274	N	TYR	A	416	11.860	27.670	52.600	1.00 21.68
ATOM	3275	CA	TYR	A	416	10.506	28.036	52.165	1.00 22.03
ATOM	3276	C	TYR	A	416	9.401	27.514	53.056	1.00 22.90
ATOM	3277	O	TYR	A	416	8.239	27.556	52.681	1.00 19.44
ATOM	3278	CB	TYR	A	416	10.181	27.732	50.669	1.00 21.41
ATOM	3279	CG	TYR	A	416	11.390	28.011	49.812	1.00 21.01
ATOM	3280	CD1	TYR	A	416	12.232	27.003	49.339	1.00 22.57
ATOM	3281	CD2	TYR	A	416	11.686	29.339	49.509	1.00 20.93
ATOM	3282	CE1	TYR	A	416	13.354	27.305	48.566	1.00 19.33
ATOM	3283	CE2	TYR	A	416	12.792	29.665	48.729	1.00 23.16
ATOM	3284	CZ	TYR	A	416	13.628	28.643	48.271	1.00 32.30
ATOM	3285	OH	TYR	A	416	14.715	28.959	47.491	1.00 25.33
ATOM	3286	N	LYS	A	417	9.747	27.012	54.230	1.00 21.98
ATOM	3287	CA	LYS	A	417	8.749	26.482	55.127	1.00 20.82
ATOM	3288	C	LYS	A	417	8.702	27.284	56.408	1.00 20.61
ATOM	3289	O	LYS	A	417	9.629	28.038	56.671	1.00 18.79
ATOM	3290	CB	LYS	A	417	9.115	25.041	55.481	1.00 22.26
ATOM	3291	CG	LYS	A	417	9.094	24.078	54.266	1.00 29.52
ATOM	3292	CD	LYS	A	417	7.999	24.355	53.237	1.00 72.37
ATOM	3293	CE	LYS	A	417	8.204	23.679	51.876	1.00100.00
ATOM	3294	NZ	LYS	A	417	7.124	23.931	50.895	1.00100.00
ATOM	3295	N	SER	A	418	7.645	27.068	57.177	1.00 17.88
ATOM	3296	CA	SER	A	418	7.429	27.702	58.478	1.00 19.91
ATOM	3297	C	SER	A	418	7.410	26.538	59.459	1.00 23.93
ATOM	3298	O	SER	A	418	6.660	25.601	59.227	1.00 21.09
ATOM	3299	CB	SER	A	418	6.139	28.495	58.451	1.00 12.45
ATOM	3300	OG	SER	A	418	6.279	29.520	57.494	1.00 17.15
ATOM	3301	N	ILE	A	419	8.240	26.529	60.516	1.00 14.38
ATOM	3302	CA	ILE	A	419	8.323	25.353	61.382	1.00 12.23
ATOM	3303	C	ILE	A	419	8.330	25.695	62.841	1.00 16.49
ATOM	3304	O	ILE	A	419	8.334	26.875	63.219	1.00 14.48
ATOM	3305	CB	ILE	A	419	9.662	24.641	61.097	1.00 18.50
ATOM	3306	CG1	ILE	A	419	10.782	25.649	61.392	1.00 18.34
ATOM	3307	CG2	ILE	A	419	9.782	24.271	59.611	1.00 14.45
ATOM	3308	CD1	ILE	A	419	12.163	25.028	61.473	1.00 22.79
ATOM	3309	N	THR	A	420	8.320	24.635	63.644	1.00 16.31
ATOM	3310	CA	THR	A	420	8.281	24.810	65.083	1.00 14.71
ATOM	3311	C	THR	A	420	9.545	24.290	65.714	1.00 16.25
ATOM	3312	O	THR	A	420	10.346	23.636	65.077	1.00 17.31
ATOM	3313	CB	THR	A	420	7.118	24.004	65.697	1.00 17.59
ATOM	3314	OG1	THR	A	420	7.437	22.645	65.519	1.00 17.59

ATOM	3315	CG2	THR	A	420	5.794	24.260	65.010	1.00 16.45
ATOM	3316	N	THR	A	421	9.679	24.540	67.010	1.00 15.19
ATOM	3317	CA	THR	A	421	10.782	24.047	67.818	1.00 15.49
ATOM	3318	C	THR	A	421	10.930	22.520	67.618	1.00 21.17
ATOM	3319	O	THR	A	421	12.041	22.044	67.401	1.00 18.91
ATOM	3320	CB	THR	A	421	10.564	24.437	69.309	1.00 10.87
ATOM	3321	OG1	THR	A	421	10.618	25.851	69.383	1.00 15.99
ATOM	3322	CG2	THR	A	421	11.691	23.868	70.170	1.00 11.46
ATOM	3323	N	ASP	A	422	9.829	21.736	67.673	1.00 18.70
ATOM	3324	CA	ASP	A	422	9.885	20.262	67.467	1.00 16.03
ATOM	3325	C	ASP	A	422	10.469	19.867	66.107	1.00 16.08
ATOM	3326	O	ASP	A	422	11.273	18.932	65.958	1.00 16.68
ATOM	3327	CB	ASP	A	422	8.523	19.568	67.581	1.00 16.64
ATOM	3328	CG	ASP	A	422	8.719	18.079	67.574	1.00 26.85
ATOM	3329	OD1	ASP	A	422	9.568	17.580	68.286	1.00 23.44
ATOM	3330	OD2	ASP	A	422	7.924	17.366	66.787	1.00 23.32
ATOM	3331	N	ASP	A	423	10.069	20.575	65.060	1.00 17.50
ATOM	3332	CA	ASP	A	423	10.654	20.224	63.757	1.00 18.18
ATOM	3333	C	ASP	A	423	12.148	20.442	63.826	1.00 17.70
ATOM	3334	O	ASP	A	423	12.922	19.645	63.316	1.00 15.95
ATOM	3335	CB	ASP	A	423	10.099	21.075	62.613	1.00 17.77
ATOM	3336	CG	ASP	A	423	8.614	20.972	62.510	1.00 20.51
ATOM	3337	OD1	ASP	A	423	8.042	19.936	62.718	1.00 29.77
ATOM	3338	OD2	ASP	A	423	8.016	22.095	62.226	1.00 18.32
ATOM	3339	N	TRP	A	424	12.559	21.545	64.459	1.00 12.60
ATOM	3340	CA	TRP	A	424	13.979	21.793	64.555	1.00 14.79
ATOM	3341	C	TRP	A	424	14.690	20.684	65.330	1.00 19.67
ATOM	3342	O	TRP	A	424	15.731	20.154	64.939	1.00 16.84
ATOM	3343	CB	TRP	A	424	14.187	23.134	65.283	1.00 14.84
ATOM	3344	CG	TRP	A	424	15.603	23.332	65.711	1.00 13.71
ATOM	3345	CD1	TRP	A	424	16.594	23.830	64.937	1.00 15.42
ATOM	3346	CD2	TRP	A	424	16.185	23.060	67.002	1.00 13.68
ATOM	3347	NE1	TRP	A	424	17.765	23.853	65.640	1.00 14.21
ATOM	3348	CE2	TRP	A	424	17.558	23.383	66.909	1.00 13.75
ATOM	3349	CE3	TRP	A	424	15.684	22.576	68.210	1.00 16.53
ATOM	3350	CZ2	TRP	A	424	18.436	23.247	67.983	1.00 13.89
ATOM	3351	CZ3	TRP	A	424	16.564	22.434	69.288	1.00 16.24
ATOM	3352	CH2	TRP	A	424	17.919	22.786	69.175	1.00 15.55
ATOM	3353	N	LYS	A	425	14.139	20.328	66.480	1.00 13.83
ATOM	3354	CA	LYS	A	425	14.778	19.337	67.319	1.00 14.35
ATOM	3355	C	LYS	A	425	14.705	17.914	66.753	1.00 19.43
ATOM	3356	O	LYS	A	425	15.619	17.089	66.910	1.00 16.20
ATOM	3357	CB	LYS	A	425	14.262	19.441	68.735	1.00 13.53
ATOM	3358	CG	LYS	A	425	14.912	18.488	69.720	1.00 14.17
ATOM	3359	CD	LYS	A	425	14.289	18.698	71.085	1.00 14.61
ATOM	3360	CE	LYS	A	425	14.214	17.413	71.872	1.00 33.75
ATOM	3361	NZ	LYS	A	425	12.961	16.707	71.574	1.00 28.69
ATOM	3362	N	ASP	A	426	13.591	17.633	66.093	1.00 17.34
ATOM	3363	CA	ASP	A	426	13.430	16.341	65.480	1.00 15.98
ATOM	3364	C	ASP	A	426	14.524	16.256	64.383	1.00 23.28
ATOM	3365	O	ASP	A	426	15.177	15.246	64.128	1.00 25.50
ATOM	3366	CB	ASP	A	426	11.987	16.225	64.918	1.00 13.29
ATOM	3367	CG	ASP	A	426	10.984	15.900	65.989	1.00 14.86
ATOM	3368	OD1	ASP	A	426	11.296	15.712	67.147	1.00 19.08
ATOM	3369	OD2	ASP	A	426	9.746	15.852	65.579	1.00 18.33
ATOM	3370	N	PHE	A	427	14.770	17.354	63.684	1.00 20.60
ATOM	3371	CA	PHE	A	427	15.789	17.331	62.633	1.00 20.61
ATOM	3372	C	PHE	A	427	17.203	17.172	63.165	1.00 26.34
ATOM	3373	O	PHE	A	427	18.056	16.476	62.592	1.00 22.98
ATOM	3374	CB	PHE	A	427	15.712	18.535	61.679	1.00 20.77
ATOM	3375	CG	PHE	A	427	16.772	18.432	60.611	1.00 24.06
ATOM	3376	CD1	PHE	A	427	16.747	17.398	59.674	1.00 27.11
ATOM	3377	CD2	PHE	A	427	17.815	19.355	60.549	1.00 24.52
ATOM	3378	CE1	PHE	A	427	17.726	17.312	58.685	1.00 27.68

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ATOM   3379  CE2 PHE A 427      18.801  19.284  59.565  1.00 28.65
ATOM   3380  CZ  PHE A 427      18.756  18.254  58.629  1.00 24.74
ATOM   3381  N   LEU A 428      17.417  17.848  64.291  1.00 22.50
ATOM   3382  CA  LEU A 428      18.686  17.827  64.979  1.00 24.10
ATOM   3383  C   LEU A 428      19.053  16.391  65.339  1.00 22.01
ATOM   3384  O   LEU A 428      20.183  15.960  65.123  1.00 23.99
ATOM   3385  CB  LEU A 428      18.685  18.806  66.186  1.00 23.18
ATOM   3386  CG  LEU A 428      19.949  18.790  67.054  1.00 26.21
ATOM   3387  CD1 LEU A 428      21.120  19.538  66.421  1.00 25.09
ATOM   3388  CD2 LEU A 428      19.659  19.334  68.459  1.00 21.07
ATOM   3389  N   TYR A 429      18.087  15.650  65.866  1.00 16.35
ATOM   3390  CA  TYR A 429      18.278  14.259  66.241  1.00 15.82
ATOM   3391  C   TYR A 429      18.482  13.390  65.019  1.00 20.80
ATOM   3392  O   TYR A 429      19.216  12.416  64.997  1.00 21.02
ATOM   3393  CB  TYR A 429      17.037  13.759  66.940  1.00 14.93
ATOM   3394  CG  TYR A 429      17.232  13.841  68.426  1.00 19.52
ATOM   3395  CD1 TYR A 429      16.999  15.039  69.104  1.00 18.07
ATOM   3396  CD2 TYR A 429      17.667  12.710  69.121  1.00 17.20
ATOM   3397  CE1 TYR A 429      17.183  15.108  70.484  1.00 14.78
ATOM   3398  CE2 TYR A 429      17.850  12.752  70.496  1.00 15.85
ATOM   3399  CZ  TYR A 429      17.615  13.961  71.157  1.00 26.56
ATOM   3400  OH  TYR A 429      17.807  14.009  72.508  1.00 23.93
ATOM   3401  N   SER A 430      17.839  13.785  63.955  1.00 18.00
ATOM   3402  CA  SER A 430      17.986  13.048  62.735  1.00 20.34
ATOM   3403  C   SER A 430      19.392  13.282  62.136  1.00 28.86
ATOM   3404  O   SER A 430      20.133  12.347  61.797  1.00 25.84
ATOM   3405  CB  SER A 430      16.843  13.486  61.845  1.00 19.64
ATOM   3406  OG  SER A 430      16.960  12.766  60.657  1.00 32.88
ATOM   3407  N   TYR A 431      19.792  14.556  62.021  1.00 23.08
ATOM   3408  CA  TYR A 431      21.104  14.862  61.497  1.00 23.26
ATOM   3409  C   TYR A 431      22.209  14.166  62.288  1.00 31.19
ATOM   3410  O   TYR A 431      23.152  13.580  61.747  1.00 27.84
ATOM   3411  CB  TYR A 431      21.392  16.372  61.476  1.00 22.23
ATOM   3412  CG  TYR A 431      22.660  16.758  60.741  1.00 23.21
ATOM   3413  CD1 TYR A 431      22.665  16.994  59.365  1.00 26.21
ATOM   3414  CD2 TYR A 431      23.864  16.920  61.433  1.00 28.30
ATOM   3415  CE1 TYR A 431      23.836  17.354  58.692  1.00 33.33
ATOM   3416  CE2 TYR A 431      25.045  17.277  60.777  1.00 29.03
ATOM   3417  CZ  TYR A 431      25.032  17.498  59.401  1.00 33.73
ATOM   3418  OH  TYR A 431      26.201  17.881  58.802  1.00 30.59
ATOM   3419  N   PHE A 432      22.078  14.272  63.608  1.00 23.42
ATOM   3420  CA  PHE A 432      23.039  13.735  64.556  1.00 22.14
ATOM   3421  C   PHE A 432      22.659  12.334  65.001  1.00 27.48
ATOM   3422  O   PHE A 432      22.824  11.964  66.168  1.00 20.81
ATOM   3423  CB  PHE A 432      23.211  14.715  65.751  1.00 20.76
ATOM   3424  CG  PHE A 432      24.035  15.918  65.348  1.00 21.62
ATOM   3425  CD1 PHE A 432      25.364  15.674  65.025  1.00 25.75
ATOM   3426  CD2 PHE A 432      23.566  17.232  65.250  1.00 22.01
ATOM   3427  CE1 PHE A 432      26.202  16.708  64.619  1.00 26.06
ATOM   3428  CE2 PHE A 432      24.398  18.277  64.841  1.00 24.06
ATOM   3429  CZ  PHE A 432      25.732  18.014  64.539  1.00 22.97
ATOM   3430  N   LYS A 433      22.150  11.536  64.065  1.00 30.29
ATOM   3431  CA  LYS A 433      21.757  10.205  64.480  1.00 33.97
ATOM   3432  C   LYS A 433      22.886   9.408  65.113  1.00 40.77
ATOM   3433  O   LYS A 433      22.690   8.545  65.964  1.00 45.44
ATOM   3434  CB  LYS A 433      21.017   9.429  63.418  1.00 41.36
ATOM   3435  CG  LYS A 433      21.934   9.107  62.270  1.00 42.12
ATOM   3436  CD  LYS A 433      21.340   9.569  60.951  1.00 85.11
ATOM   3437  CE  LYS A 433      21.770   8.690  59.784  1.00100.00
ATOM   3438  NZ  LYS A 433      21.052   8.990  58.530  1.00100.00
ATOM   3439  N   ASP A 434      24.091   9.729  64.700  1.00 38.33
ATOM   3440  CA  ASP A 434      25.295   9.086  65.188  1.00 40.98
ATOM   3441  C   ASP A 434      25.640   9.549  66.594  1.00 42.43
ATOM   3442  O   ASP A 434      26.508   8.979  67.241  1.00 42.35
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ATOM	3443	CB	ASP	A	434	26.493	9.429	64.250	1.00	47.81
ATOM	3444	CG	ASP	A	434	26.762	10.919	64.034	1.00	73.28
ATOM	3445	OD1	ASP	A	434	25.948	11.739	63.601	1.00	69.11
ATOM	3446	OD2	ASP	A	434	28.007	11.242	64.314	1.00	80.38
ATOM	3447	N	LYS	A	435	24.987	10.601	67.068	1.00	33.72
ATOM	3448	CA	LYS	A	435	25.312	11.120	68.374	1.00	30.49
ATOM	3449	C	LYS	A	435	24.122	11.247	69.306	1.00	32.57
ATOM	3450	O	LYS	A	435	24.181	12.067	70.217	1.00	29.28
ATOM	3451	CB	LYS	A	435	26.018	12.465	68.200	1.00	30.20
ATOM	3452	CG	LYS	A	435	27.396	12.351	67.568	1.00	19.40
ATOM	3453	CD	LYS	A	435	27.984	13.718	67.237	1.00	28.53
ATOM	3454	CE	LYS	A	435	29.504	13.723	67.224	1.00	36.05
ATOM	3455	NZ	LYS	A	435	30.078	14.696	66.281	1.00	38.07
ATOM	3456	N	VAL	A	436	23.063	10.467	69.083	1.00	32.65
ATOM	3457	CA	VAL	A	436	21.867	10.565	69.920	1.00	36.68
ATOM	3458	C	VAL	A	436	22.189	10.528	71.391	1.00	39.39
ATOM	3459	O	VAL	A	436	21.544	11.154	72.236	1.00	34.16
ATOM	3460	CB	VAL	A	436	20.768	9.553	69.613	1.00	44.95
ATOM	3461	CG1	VAL	A	436	20.016	9.971	68.355	1.00	45.77
ATOM	3462	CG2	VAL	A	436	21.391	8.187	69.405	1.00	48.21
ATOM	3463	N	ASP	A	437	23.205	9.740	71.670	1.00	40.66
ATOM	3464	CA	ASP	A	437	23.663	9.569	73.019	1.00	39.64
ATOM	3465	C	ASP	A	437	24.119	10.875	73.622	1.00	35.59
ATOM	3466	O	ASP	A	437	23.871	11.128	74.785	1.00	36.38
ATOM	3467	CB	ASP	A	437	24.686	8.437	73.136	1.00	42.27
ATOM	3468	CG	ASP	A	437	23.976	7.123	73.303	1.00	64.05
ATOM	3469	OD1	ASP	A	437	22.749	7.018	73.361	1.00	57.77
ATOM	3470	OD2	ASP	A	437	24.825	6.121	73.385	1.00	89.95
ATOM	3471	N	VAL	A	438	24.778	11.697	72.826	1.00	33.10
ATOM	3472	CA	VAL	A	438	25.235	12.988	73.309	1.00	31.59
ATOM	3473	C	VAL	A	438	24.012	13.879	73.521	1.00	28.65
ATOM	3474	O	VAL	A	438	23.828	14.461	74.571	1.00	26.75
ATOM	3475	CB	VAL	A	438	26.289	13.599	72.371	1.00	30.58
ATOM	3476	CG1	VAL	A	438	26.809	14.928	72.920	1.00	27.87
ATOM	3477	CG2	VAL	A	438	27.441	12.608	72.226	1.00	29.01
ATOM	3478	N	LEU	A	439	23.179	13.926	72.494	1.00	22.69
ATOM	3479	CA	LEU	A	439	21.952	14.698	72.466	1.00	20.02
ATOM	3480	C	LEU	A	439	21.118	14.396	73.675	1.00	28.06
ATOM	3481	O	LEU	A	439	20.547	15.279	74.289	1.00	31.30
ATOM	3482	CB	LEU	A	439	21.125	14.403	71.201	1.00	17.24
ATOM	3483	CG	LEU	A	439	21.769	15.002	69.960	1.00	19.41
ATOM	3484	CD1	LEU	A	439	21.029	14.542	68.724	1.00	16.82
ATOM	3485	CD2	LEU	A	439	21.748	16.528	70.034	1.00	23.96
ATOM	3486	N	ASN	A	440	21.045	13.129	74.022	1.00	24.23
ATOM	3487	CA	ASN	A	440	20.242	12.765	75.165	1.00	24.80
ATOM	3488	C	ASN	A	440	20.785	13.294	76.473	1.00	29.26
ATOM	3489	O	ASN	A	440	20.128	13.233	77.507	1.00	31.02
ATOM	3490	CB	ASN	A	440	19.842	11.275	75.237	1.00	28.06
ATOM	3491	CG	ASN	A	440	18.971	10.884	74.066	1.00	29.31
ATOM	3492	OD1	ASN	A	440	19.138	9.820	73.451	1.00	40.12
ATOM	3493	ND2	ASN	A	440	18.058	11.773	73.721	1.00	28.40
ATOM	3494	N	GLN	A	441	21.984	13.833	76.434	1.00	26.30
ATOM	3495	CA	GLN	A	441	22.535	14.361	77.656	1.00	27.26
ATOM	3496	C	GLN	A	441	22.022	15.764	77.912	1.00	26.46
ATOM	3497	O	GLN	A	441	22.203	16.336	78.988	1.00	25.27
ATOM	3498	CB	GLN	A	441	24.073	14.404	77.609	1.00	32.14
ATOM	3499	CG	GLN	A	441	24.762	13.016	77.641	1.00	49.60
ATOM	3500	CD	GLN	A	441	26.057	13.019	76.850	1.00	66.63
ATOM	3501	OE1	GLN	A	441	26.546	11.975	76.382	1.00	76.27
ATOM	3502	NE2	GLN	A	441	26.608	14.217	76.676	1.00	56.68
ATOM	3503	N	VAL	A	442	21.388	16.345	76.909	1.00	21.59
ATOM	3504	CA	VAL	A	442	20.922	17.688	77.159	1.00	18.91
ATOM	3505	C	VAL	A	442	19.615	17.729	77.897	1.00	19.52
ATOM	3506	O	VAL	A	442	18.742	16.908	77.650	1.00	21.02

ATOM	3507	CB	VAL	A	442	20.898	18.538	75.917	1.00	19.77
ATOM	3508	CG1	VAL	A	442	21.472	17.891	74.680	1.00	23.00
ATOM	3509	CG2	VAL	A	442	19.787	19.580	75.787	1.00	13.26
ATOM	3510	N	ASP	A	443	19.490	18.677	78.811	1.00	17.20
ATOM	3511	CA	ASP	A	443	18.243	18.856	79.551	1.00	16.44
ATOM	3512	C	ASP	A	443	17.277	19.752	78.727	1.00	17.64
ATOM	3513	O	ASP	A	443	17.091	20.980	78.921	1.00	15.06
ATOM	3514	CB	ASP	A	443	18.611	19.494	80.901	1.00	17.40
ATOM	3515	CG	ASP	A	443	17.422	19.595	81.778	1.00	21.50
ATOM	3516	OD1	ASP	A	443	16.309	19.286	81.395	1.00	26.57
ATOM	3517	OD2	ASP	A	443	17.731	20.068	82.959	1.00	23.49
ATOM	3518	N	TRP	A	444	16.675	19.105	77.736	1.00	15.54
ATOM	3519	CA	TRP	A	444	15.763	19.759	76.816	1.00	16.92
ATOM	3520	C	TRP	A	444	14.641	20.468	77.546	1.00	19.29
ATOM	3521	O	TRP	A	444	14.292	21.572	77.194	1.00	18.00
ATOM	3522	CB	TRP	A	444	15.195	18.747	75.793	1.00	13.71
ATOM	3523	CG	TRP	A	444	16.267	18.226	74.892	1.00	14.88
ATOM	3524	CD1	TRP	A	444	16.797	16.969	74.872	1.00	17.32
ATOM	3525	CD2	TRP	A	444	16.952	18.958	73.861	1.00	16.34
ATOM	3526	NE1	TRP	A	444	17.779	16.869	73.915	1.00	14.83
ATOM	3527	CE2	TRP	A	444	17.880	18.063	73.255	1.00	16.96
ATOM	3528	CE3	TRP	A	444	16.896	20.295	73.415	1.00	17.06
ATOM	3529	CZ2	TRP	A	444	18.737	18.482	72.229	1.00	16.95
ATOM	3530	CZ3	TRP	A	444	17.750	20.697	72.382	1.00	16.35
ATOM	3531	CH2	TRP	A	444	18.664	19.807	71.806	1.00	16.47
ATOM	3532	N	ASN	A	445	14.059	19.808	78.557	1.00	18.46
ATOM	3533	CA	ASN	A	445	12.957	20.414	79.260	1.00	17.22
ATOM	3534	C	ASN	A	445	13.334	21.761	79.837	1.00	20.45
ATOM	3535	O	ASN	A	445	12.581	22.732	79.740	1.00	17.51
ATOM	3536	CB	ASN	A	445	12.347	19.512	80.357	1.00	15.11
ATOM	3537	CG	ASN	A	445	11.322	20.272	81.234	1.00	46.40
ATOM	3538	OD1	ASN	A	445	11.526	20.515	82.448	1.00	39.99
ATOM	3539	ND2	ASN	A	445	10.198	20.671	80.643	1.00	26.34
ATOM	3540	N	ALA	A	446	14.504	21.791	80.484	1.00	18.70
ATOM	3541	CA	ALA	A	446	14.918	23.022	81.091	1.00	16.75
ATOM	3542	C	ALA	A	446	15.272	24.029	80.032	1.00	21.46
ATOM	3543	O	ALA	A	446	14.765	25.172	80.030	1.00	20.55
ATOM	3544	CB	ALA	A	446	16.049	22.774	82.055	1.00	19.42
ATOM	3545	N	TRP	A	447	16.116	23.605	79.097	1.00	16.36
ATOM	3546	CA	TRP	A	447	16.476	24.563	78.054	1.00	14.85
ATOM	3547	C	TRP	A	447	15.277	25.163	77.279	1.00	18.68
ATOM	3548	O	TRP	A	447	15.246	26.365	76.985	1.00	14.03
ATOM	3549	CB	TRP	A	447	17.473	23.938	77.040	1.00	17.25
ATOM	3550	CG	TRP	A	447	18.952	23.982	77.391	1.00	19.35
ATOM	3551	CD1	TRP	A	447	19.697	22.957	77.930	1.00	22.25
ATOM	3552	CD2	TRP	A	447	19.864	25.090	77.224	1.00	16.70
ATOM	3553	NE1	TRP	A	447	21.007	23.356	78.105	1.00	19.46
ATOM	3554	CE2	TRP	A	447	21.131	24.662	77.679	1.00	18.42
ATOM	3555	CE3	TRP	A	447	19.737	26.403	76.766	1.00	16.34
ATOM	3556	CZ2	TRP	A	447	22.241	25.512	77.625	1.00	16.76
ATOM	3557	CZ3	TRP	A	447	20.854	27.230	76.705	1.00	14.87
ATOM	3558	CH2	TRP	A	447	22.090	26.786	77.141	1.00	14.22
ATOM	3559	N	LEU	A	448	14.275	24.336	76.899	1.00	14.96
ATOM	3560	CA	LEU	A	448	13.146	24.835	76.096	1.00	16.27
ATOM	3561	C	LEU	A	448	11.995	25.464	76.877	1.00	17.91
ATOM	3562	O	LEU	A	448	11.332	26.404	76.398	1.00	13.49
ATOM	3563	CB	LEU	A	448	12.522	23.690	75.238	1.00	16.42
ATOM	3564	CG	LEU	A	448	13.500	22.945	74.302	1.00	16.43
ATOM	3565	CD1	LEU	A	448	12.845	21.795	73.536	1.00	15.65
ATOM	3566	CD2	LEU	A	448	14.163	23.901	73.315	1.00	12.87
ATOM	3567	N	TYR	A	449	11.733	24.874	78.048	1.00	15.32
ATOM	3568	CA	TYR	A	449	10.557	25.255	78.826	1.00	15.36
ATOM	3569	C	TYR	A	449	10.763	25.822	80.198	1.00	19.93
ATOM	3570	O	TYR	A	449	9.763	26.226	80.806	1.00	21.29

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ATOM   3571  CB  TYR A 449       9.611  24.031  78.983  1.00 14.65
ATOM   3572  CG  TYR A 449       9.473  23.315  77.667  1.00 17.69
ATOM   3573  CD1 TYR A 449       9.117  24.048  76.533  1.00 22.12
ATOM   3574  CD2 TYR A 449       9.771  21.958  77.541  1.00 19.27
ATOM   3575  CE1 TYR A 449       9.010  23.432  75.286  1.00 21.15
ATOM   3576  CE2 TYR A 449       9.669  21.318  76.301  1.00 18.29
ATOM   3577  CZ  TYR A 449       9.301  22.070  75.183  1.00 25.71
ATOM   3578  OH  TYR A 449       9.216  21.480  73.951  1.00 26.15
ATOM   3579  N   SER A 450      11.985  25.806  80.724  1.00 15.79
ATOM   3580  CA  SER A 450      12.156  26.362  82.061  1.00 14.12
ATOM   3581  C   SER A 450      12.474  27.864  82.025  1.00 16.42
ATOM   3582  O   SER A 450      13.127  28.340  81.109  1.00 15.32
ATOM   3583  CB  SER A 450      13.136  25.567  82.938  1.00 20.04
ATOM   3584  OG  SER A 450      12.687  24.254  83.189  1.00 16.61
ATOM   3585  N   PRO A 451      11.995  28.645  83.014  1.00 14.16
ATOM   3586  CA  PRO A 451      12.287  30.052  83.032  1.00 12.96
ATOM   3587  C   PRO A 451      13.696  30.228  83.581  1.00 15.11
ATOM   3588  O   PRO A 451      14.347  29.259  83.997  1.00 15.64
ATOM   3589  CB  PRO A 451      11.274  30.669  84.029  1.00 11.76
ATOM   3590  CG  PRO A 451      10.903  29.560  84.988  1.00 16.01
ATOM   3591  CD  PRO A 451      11.298  28.259  84.288  1.00 15.25
ATOM   3592  N   GLY A 452      14.148  31.481  83.586  1.00 12.85
ATOM   3593  CA  GLY A 452      15.430  31.822  84.160  1.00 12.46
ATOM   3594  C   GLY A 452      16.652  31.517  83.311  1.00 17.53
ATOM   3595  O   GLY A 452      16.559  31.320  82.117  1.00 14.38
ATOM   3596  N   LEU A 453      17.839  31.539  83.926  1.00 17.18
ATOM   3597  CA  LEU A 453      19.054  31.268  83.196  1.00 14.53
ATOM   3598  C   LEU A 453      19.087  29.819  82.762  1.00 14.71
ATOM   3599  O   LEU A 453      18.523  28.978  83.456  1.00 16.06
ATOM   3600  CB  LEU A 453      20.296  31.588  84.031  1.00 14.09
ATOM   3601  CG  LEU A 453      20.526  33.091  84.216  1.00 18.81
ATOM   3602  CD1 LEU A 453      21.635  33.253  85.247  1.00 16.98
ATOM   3603  CD2 LEU A 453      21.001  33.761  82.919  1.00 21.45
ATOM   3604  N   PRO A 454      19.770  29.537  81.637  1.00 15.62
ATOM   3605  CA  PRO A 454      19.907  28.194  81.119  1.00 15.68
ATOM   3606  C   PRO A 454      20.486  27.258  82.170  1.00 21.35
ATOM   3607  O   PRO A 454      21.236  27.662  83.039  1.00 21.73
ATOM   3608  CB  PRO A 454      20.918  28.317  79.965  1.00 16.56
ATOM   3609  CG  PRO A 454      20.906  29.751  79.501  1.00 16.74
ATOM   3610  CD  PRO A 454      20.290  30.524  80.640  1.00 15.71
ATOM   3611  N   PRO A 455      20.146  25.978  82.079  1.00 16.53
ATOM   3612  CA  PRO A 455      20.619  24.976  83.005  1.00 16.33
ATOM   3613  C   PRO A 455      22.146  24.834  83.016  1.00 25.51
ATOM   3614  O   PRO A 455      22.718  24.370  83.999  1.00 24.17
ATOM   3615  CB  PRO A 455      19.999  23.666  82.520  1.00 17.40
ATOM   3616  CG  PRO A 455      19.523  23.888  81.094  1.00 21.81
ATOM   3617  CD  PRO A 455      19.403  25.389  80.932  1.00 19.90
ATOM   3618  N   ILE A 456      22.816  25.205  81.916  1.00 20.88
ATOM   3619  CA  ILE A 456      24.262  25.117  81.810  1.00 17.40
ATOM   3620  C   ILE A 456      24.822  26.292  81.000  1.00 19.27
ATOM   3621  O   ILE A 456      24.191  26.798  80.064  1.00 17.96
ATOM   3622  CB  ILE A 456      24.675  23.737  81.316  1.00 23.45
ATOM   3623  CG1 ILE A 456      26.173  23.543  81.456  1.00 27.66
ATOM   3624  CG2 ILE A 456      24.285  23.529  79.865  1.00 26.37
ATOM   3625  CD1 ILE A 456      26.571  22.167  80.951  1.00 35.97
ATOM   3626  N   LYS A 457      26.011  26.772  81.383  1.00 15.81
ATOM   3627  CA  LYS A 457      26.649  27.883  80.697  1.00 17.12
ATOM   3628  C   LYS A 457      27.727  27.333  79.815  1.00 18.91
ATOM   3629  O   LYS A 457      28.541  26.562  80.281  1.00 17.84
ATOM   3630  CB  LYS A 457      27.308  28.793  81.727  1.00 16.24
ATOM   3631  CG  LYS A 457      27.896  30.067  81.130  1.00 16.93
ATOM   3632  CD  LYS A 457      28.245  31.062  82.227  1.00 10.77
ATOM   3633  CE  LYS A 457      28.785  32.347  81.659  1.00 11.49
ATOM   3634  NZ  LYS A 457      29.467  33.164  82.683  1.00 18.20
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ATOM   3635  N   PRO A 458      27.733  27.708  78.558  1.00 15.31
ATOM   3636  CA  PRO A 458      28.780  27.205  77.655  1.00 13.94
ATOM   3637  C   PRO A 458      30.169  27.681  78.096  1.00 16.97
ATOM   3638  O   PRO A 458      30.341  28.456  79.036  1.00 14.39
ATOM   3639  CB  PRO A 458      28.465  27.835  76.274  1.00 13.66
ATOM   3640  CG  PRO A 458      27.036  28.364  76.363  1.00 14.88
ATOM   3641  CD  PRO A 458      26.702  28.535  77.855  1.00 10.08
ATOM   3642  N   ASN A 459      31.199  27.223  77.408  1.00 17.07
ATOM   3643  CA  ASN A 459      32.546  27.672  77.722  1.00 15.61
ATOM   3644  C   ASN A 459      32.924  28.839  76.793  1.00 22.19
ATOM   3645  O   ASN A 459      32.647  28.812  75.578  1.00 20.83
ATOM   3646  CB  ASN A 459      33.580  26.559  77.455  1.00 19.60
ATOM   3647  CG  ASN A 459      33.158  25.288  78.136  1.00 26.10
ATOM   3648  OD1 ASN A 459      32.952  25.278  79.347  1.00 25.15
ATOM   3649  ND2 ASN A 459      32.972  24.236  77.361  1.00 24.39
ATOM   3650  N   TYR A 460      33.620  29.849  77.341  1.00 13.51
ATOM   3651  CA  TYR A 460      34.021  30.994  76.536  1.00 14.52
ATOM   3652  C   TYR A 460      35.485  31.370  76.683  1.00 16.97
ATOM   3653  O   TYR A 460      36.003  31.442  77.802  1.00 13.34
ATOM   3654  CB  TYR A 460      33.266  32.254  76.990  1.00 12.53
ATOM   3655  CG  TYR A 460      31.764  32.129  76.980  1.00 13.07
ATOM   3656  CD1 TYR A 460      31.070  31.553  78.046  1.00 17.79
ATOM   3657  CD2 TYR A 460      31.043  32.584  75.880  1.00 12.08
ATOM   3658  CE1 TYR A 460      29.677  31.450  78.049  1.00 16.54
ATOM   3659  CE2 TYR A 460      29.654  32.477  75.861  1.00 11.82
ATOM   3660  CZ  TYR A 460      28.971  31.911  76.938  1.00 16.71
ATOM   3661  OH  TYR A 460      27.589  31.834  76.894  1.00 15.52
ATOM   3662  N   ASP A 461      36.098  31.706  75.558  1.00 13.99
ATOM   3663  CA  ASP A 461      37.463  32.218  75.579  1.00 13.74
ATOM   3664  C   ASP A 461      37.414  33.608  76.255  1.00 16.51
ATOM   3665  O   ASP A 461      36.516  34.415  75.966  1.00 15.04
ATOM   3666  CB  ASP A 461      37.968  32.336  74.133  1.00 12.98
ATOM   3667  CG  ASP A 461      39.393  32.801  74.148  1.00 25.31
ATOM   3668  OD1 ASP A 461      40.335  32.064  74.314  1.00 40.40
ATOM   3669  OD2 ASP A 461      39.520  34.087  74.051  1.00 19.41
ATOM   3670  N   MET A 462      38.339  33.887  77.191  1.00 12.14
ATOM   3671  CA  MET A 462      38.359  35.144  77.928  1.00  9.92
ATOM   3672  C   MET A 462      39.312  36.203  77.406  1.00 15.43
ATOM   3673  O   MET A 462      39.413  37.265  77.958  1.00 15.61
ATOM   3674  CB  MET A 462      38.688  34.910  79.404  1.00  9.27
ATOM   3675  CG  MET A 462      37.716  33.909  79.977  1.00 13.43
ATOM   3676  SD  MET A 462      36.053  34.635  80.074  1.00 19.12
ATOM   3677  CE  MET A 462      36.505  35.919  81.264  1.00 17.88
ATOM   3678  N   THR A 463      40.037  35.922  76.347  1.00 13.87
ATOM   3679  CA  THR A 463      41.004  36.860  75.849  1.00 12.21
ATOM   3680  C   THR A 463      40.675  38.339  75.910  1.00 16.34
ATOM   3681  O   THR A 463      41.365  39.106  76.567  1.00 16.05
ATOM   3682  CB  THR A 463      41.595  36.434  74.489  1.00 17.83
ATOM   3683  OG1 THR A 463      41.940  35.051  74.538  1.00 14.22
ATOM   3684  CG2 THR A 463      42.841  37.298  74.204  1.00 15.70
ATOM   3685  N   LEU A 464      39.679  38.762  75.136  1.00 14.21
ATOM   3686  CA  LEU A 464      39.262  40.154  75.060  1.00 13.52
ATOM   3687  C   LEU A 464      38.408  40.679  76.228  1.00 12.70
ATOM   3688  O   LEU A 464      38.259  41.881  76.442  1.00 15.39
ATOM   3689  CB  LEU A 464      38.508  40.348  73.725  1.00 13.87
ATOM   3690  CG  LEU A 464      39.363  40.009  72.495  1.00 18.04
ATOM   3691  CD1 LEU A 464      38.448  40.076  71.260  1.00 14.36
ATOM   3692  CD2 LEU A 464      40.490  41.054  72.345  1.00 17.86
ATOM   3693  N   THR A 465      37.808  39.770  76.979  1.00 11.81
ATOM   3694  CA  THR A 465      36.946  40.116  78.103  1.00 10.62
ATOM   3695  C   THR A 465      37.728  40.487  79.360  1.00 17.70
ATOM   3696  O   THR A 465      37.361  41.359  80.131  1.00 15.35
ATOM   3697  CB  THR A 465      35.996  38.934  78.368  1.00 12.56
ATOM   3698  OG1 THR A 465      35.209  38.765  77.199  1.00 16.68
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ATOM	3699	CG2	THR	A	465	35.075	39.241	79.545	1.00 17.17
ATOM	3700	N	ASN	A	466	38.828	39.785	79.584	1.00 14.17
ATOM	3701	CA	ASN	A	466	39.639	40.017	80.738	1.00 14.86
ATOM	3702	C	ASN	A	466	39.933	41.491	81.017	1.00 16.02
ATOM	3703	O	ASN	A	466	39.843	41.892	82.177	1.00 17.05
ATOM	3704	CB	ASN	A	466	40.942	39.197	80.694	1.00 14.48
ATOM	3705	CG	ASN	A	466	40.787	37.705	80.932	1.00 22.10
ATOM	3706	OD1	ASN	A	466	41.539	36.878	80.386	1.00 21.72
ATOM	3707	ND2	ASN	A	466	39.925	37.356	81.852	1.00 11.12
ATOM	3708	N	ALA	A	467	40.313	42.307	80.012	1.00 16.17
ATOM	3709	CA	ALA	A	467	40.614	43.704	80.336	1.00 16.10
ATOM	3710	C	ALA	A	467	39.394	44.448	80.871	1.00 20.19
ATOM	3711	O	ALA	A	467	39.488	45.363	81.722	1.00 17.63
ATOM	3712	CB	ALA	A	467	41.159	44.411	79.118	1.00 14.71
ATOM	3713	N	CYS	A	468	38.227	44.022	80.343	1.00 15.87
ATOM	3714	CA	CYS	A	468	36.938	44.608	80.712	1.00 13.86
ATOM	3715	C	CYS	A	468	36.609	44.369	82.167	1.00 15.16
ATOM	3716	O	CYS	A	468	36.229	45.234	82.931	1.00 17.79
ATOM	3717	CB	CYS	A	468	35.820	44.045	79.808	1.00 11.73
ATOM	3718	SG	CYS	A	468	36.215	44.458	78.102	1.00 15.87
ATOM	3719	N	ILE	A	469	36.811	43.145	82.571	1.00 13.83
ATOM	3720	CA	ILE	A	469	36.531	42.747	83.941	1.00 11.80
ATOM	3721	C	ILE	A	469	37.488	43.393	84.910	1.00 16.06
ATOM	3722	O	ILE	A	469	37.076	43.848	85.970	1.00 18.22
ATOM	3723	CB	ILE	A	469	36.659	41.230	84.042	1.00 15.30
ATOM	3724	CG1	ILE	A	469	35.527	40.557	83.263	1.00 19.73
ATOM	3725	CG2	ILE	A	469	36.688	40.791	85.497	1.00 11.46
ATOM	3726	CD1	ILE	A	469	35.788	39.073	82.977	1.00 25.13
ATOM	3727	N	ALA	A	470	38.776	43.375	84.572	1.00 12.77
ATOM	3728	CA	ALA	A	470	39.729	43.967	85.475	1.00 11.93
ATOM	3729	C	ALA	A	470	39.304	45.404	85.786	1.00 14.05
ATOM	3730	O	ALA	A	470	39.264	45.860	86.941	1.00 15.14
ATOM	3731	CB	ALA	A	470	41.078	43.982	84.759	1.00 12.54
ATOM	3732	N	LEU	A	471	38.979	46.120	84.708	1.00 15.25
ATOM	3733	CA	LEU	A	471	38.585	47.538	84.796	1.00 13.62
ATOM	3734	C	LEU	A	471	37.257	47.792	85.510	1.00 17.64
ATOM	3735	O	LEU	A	471	37.144	48.630	86.411	1.00 13.08
ATOM	3736	CB	LEU	A	471	38.685	48.274	83.442	1.00 11.79
ATOM	3737	CG	LEU	A	471	38.684	49.803	83.614	1.00 15.97
ATOM	3738	CD1	LEU	A	471	39.855	50.262	84.497	1.00 12.47
ATOM	3739	CD2	LEU	A	471	38.753	50.493	82.248	1.00 17.27
ATOM	3740	N	SER	A	472	36.220	47.049	85.137	1.00 14.37
ATOM	3741	CA	SER	A	472	34.963	47.264	85.808	1.00 11.84
ATOM	3742	C	SER	A	472	35.082	46.900	87.284	1.00 18.13
ATOM	3743	O	SER	A	472	34.533	47.581	88.145	1.00 16.29
ATOM	3744	CB	SER	A	472	33.822	46.488	85.153	1.00 12.21
ATOM	3745	OG	SER	A	472	34.090	45.121	85.240	1.00 18.74
ATOM	3746	N	GLN	A	473	35.761	45.804	87.615	1.00 12.67
ATOM	3747	CA	GLN	A	473	35.886	45.455	89.028	1.00 10.49
ATOM	3748	C	GLN	A	473	36.615	46.538	89.813	1.00 12.50
ATOM	3749	O	GLN	A	473	36.278	46.879	90.950	1.00 12.44
ATOM	3750	CB	GLN	A	473	36.649	44.137	89.180	1.00 13.06
ATOM	3751	CG	GLN	A	473	35.730	42.908	89.040	1.00 20.04
ATOM	3752	CD	GLN	A	473	34.634	42.874	90.108	1.00 19.81
ATOM	3753	OE1	GLN	A	473	34.917	42.605	91.270	1.00 30.46
ATOM	3754	NE2	GLN	A	473	33.387	43.130	89.742	1.00 21.25
ATOM	3755	N	ARG	A	474	37.656	47.087	89.183	1.00 14.11
ATOM	3756	CA	ARG	A	474	38.400	48.158	89.868	1.00 17.39
ATOM	3757	C	ARG	A	474	37.478	49.325	90.235	1.00 21.36
ATOM	3758	O	ARG	A	474	37.577	49.922	91.304	1.00 18.76
ATOM	3759	CB	ARG	A	474	39.532	48.719	89.034	1.00 11.27
ATOM	3760	CG	ARG	A	474	40.786	47.842	89.038	1.00 17.88
ATOM	3761	CD	ARG	A	474	41.727	48.283	87.928	1.00 21.70
ATOM	3762	NE	ARG	A	474	42.122	49.665	88.177	1.00 19.49

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ATOM   3763  CZ  ARG A 474      42.837  50.419  87.361  1.00 31.34
ATOM   3764  NH1 ARG A 474      43.239  49.918  86.190  1.00 25.99
ATOM   3765  NH2 ARG A 474      43.160  51.679  87.742  1.00 17.92
ATOM   3766  N   TRP A 475      36.602  49.686  89.306  1.00 14.64
ATOM   3767  CA  TRP A 475      35.683  50.774  89.542  1.00 13.85
ATOM   3768  C   TRP A 475      34.608  50.352  90.524  1.00 18.33
ATOM   3769  O   TRP A 475      34.250  51.076  91.430  1.00 15.30
ATOM   3770  CB  TRP A 475      35.033  51.236  88.235  1.00 13.65
ATOM   3771  CG  TRP A 475      35.867  52.222  87.479  1.00 14.81
ATOM   3772  CD1 TRP A 475      36.645  51.943  86.399  1.00 17.78
ATOM   3773  CD2 TRP A 475      36.007  53.640  87.742  1.00 14.88
ATOM   3774  NE1 TRP A 475      37.284  53.090  85.976  1.00 18.25
ATOM   3775  CE2 TRP A 475      36.885  54.152  86.756  1.00 20.66
ATOM   3776  CE3 TRP A 475      35.464  54.518  88.694  1.00 15.98
ATOM   3777  CZ2 TRP A 475      37.243  55.511  86.714  1.00 19.78
ATOM   3778  CZ3 TRP A 475      35.839  55.853  88.665  1.00 18.27
ATOM   3779  CH2 TRP A 475      36.723  56.341  87.682  1.00 18.20
ATOM   3780  N   ILE A 476      34.081  49.157  90.362  1.00 15.43
ATOM   3781  CA  ILE A 476      33.027  48.713  91.251  1.00 15.88
ATOM   3782  C   ILE A 476      33.508  48.628  92.684  1.00 21.66
ATOM   3783  O   ILE A 476      32.742  48.833  93.614  1.00 20.18
ATOM   3784  CB  ILE A 476      32.498  47.354  90.775  1.00 16.74
ATOM   3785  CG1 ILE A 476      31.692  47.485  89.497  1.00 13.74
ATOM   3786  CG2 ILE A 476      31.697  46.620  91.844  1.00 17.08
ATOM   3787  CD1 ILE A 476      31.568  46.130  88.810  1.00 22.82
ATOM   3788  N   THR A 477      34.780  48.321  92.886  1.00 18.89
ATOM   3789  CA  THR A 477      35.286  48.193  94.256  1.00 15.92
ATOM   3790  C   THR A 477      36.151  49.355  94.708  1.00 17.65
ATOM   3791  O   THR A 477      36.711  49.333  95.792  1.00 17.49
ATOM   3792  CB  THR A 477      36.132  46.904  94.384  1.00 21.13
ATOM   3793  OG1 THR A 477      37.296  46.986  93.545  1.00 19.88
ATOM   3794  CG2 THR A 477      35.268  45.673  94.035  1.00 16.31
ATOM   3795  N   ALA A 478      36.302  50.369  93.884  1.00 18.44
ATOM   3796  CA  ALA A 478      37.131  51.548  94.191  1.00 16.94
ATOM   3797  C   ALA A 478      36.729  52.219  95.490  1.00 20.18
ATOM   3798  O   ALA A 478      35.552  52.233  95.863  1.00 19.40
ATOM   3799  CB  ALA A 478      37.017  52.608  93.077  1.00 15.66
ATOM   3800  N   LYS A 479      37.753  52.763  96.148  1.00 17.33
ATOM   3801  CA  LYS A 479      37.654  53.518  97.371  1.00 15.43
ATOM   3802  C   LYS A 479      38.196  54.907  97.115  1.00 19.77
ATOM   3803  O   LYS A 479      38.757  55.192  96.073  1.00 16.97
ATOM   3804  CB  LYS A 479      38.325  52.853  98.562  1.00 17.71
ATOM   3805  CG  LYS A 479      37.468  51.685  99.049  1.00 25.29
ATOM   3806  CD  LYS A 479      38.002  51.058 100.324  1.00 28.77
ATOM   3807  CE  LYS A 479      36.895  50.623 101.280  1.00 75.63
ATOM   3808  NZ  LYS A 479      36.090  49.481 100.815  1.00 66.83
ATOM   3809  N   GLU A 480      38.010  55.793  98.068  1.00 19.41
ATOM   3810  CA  GLU A 480      38.497  57.120  97.853  1.00 19.30
ATOM   3811  C   GLU A 480      39.933  57.069  97.387  1.00 21.25
ATOM   3812  O   GLU A 480      40.321  57.802  96.489  1.00 21.38
ATOM   3813  CB  GLU A 480      38.457  57.901  99.183  1.00 21.20
ATOM   3814  CG  GLU A 480      37.322  58.931  99.171  1.00 53.93
ATOM   3815  CD  GLU A 480      37.505  59.998  98.131  1.00100.00
ATOM   3816  OE1 GLU A 480      38.596  60.401  97.756  1.00100.00
ATOM   3817  OE2 GLU A 480      36.360  60.456  97.684  1.00100.00
ATOM   3818  N   ASP A 481      40.730  56.249  98.059  1.00 15.59
ATOM   3819  CA  ASP A 481      42.120  56.150  97.734  1.00 17.58
ATOM   3820  C   ASP A 481      42.463  55.609  96.372  1.00 22.00
ATOM   3821  O   ASP A 481      43.639  55.651  96.002  1.00 21.23
ATOM   3822  CB  ASP A 481      42.966  55.475  98.824  1.00 22.35
ATOM   3823  CG  ASP A 481      42.845  53.974  98.879  1.00 26.70
ATOM   3824  OD1 ASP A 481      42.040  53.276  98.295  1.00 22.31
ATOM   3825  OD2 ASP A 481      43.769  53.466  99.638  1.00 19.37
ATOM   3826  N   ASP A 482      41.483  55.147  95.608  1.00 16.23
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ATOM	3827	CA	ASP	A	482	41.795	54.667	94.250	1.00 15.66
ATOM	3828	C	ASP	A	482	41.485	55.667	93.144	1.00 20.38
ATOM	3829	O	ASP	A	482	41.994	55.549	92.031	1.00 19.78
ATOM	3830	CB	ASP	A	482	41.058	53.340	93.885	1.00 16.37
ATOM	3831	CG	ASP	A	482	41.360	52.283	94.918	1.00 14.59
ATOM	3832	OD1	ASP	A	482	42.463	51.867	95.146	1.00 16.94
ATOM	3833	OD2	ASP	A	482	40.338	51.972	95.654	1.00 17.55
ATOM	3834	N	LEU	A	483	40.627	56.645	93.423	1.00 17.94
ATOM	3835	CA	LEU	A	483	40.167	57.591	92.403	1.00 14.70
ATOM	3836	C	LEU	A	483	41.214	58.319	91.581	1.00 21.17
ATOM	3837	O	LEU	A	483	41.122	58.519	90.368	1.00 21.03
ATOM	3838	CB	LEU	A	483	39.110	58.581	92.960	1.00 13.43
ATOM	3839	CG	LEU	A	483	37.870	57.925	93.558	1.00 15.53
ATOM	3840	CD1	LEU	A	483	36.970	59.020	94.114	1.00 19.32
ATOM	3841	CD2	LEU	A	483	37.047	57.172	92.512	1.00 16.27
ATOM	3842	N	ASN	A	484	42.220	58.761	92.289	1.00 19.63
ATOM	3843	CA	ASN	A	484	43.274	59.541	91.713	1.00 19.74
ATOM	3844	C	ASN	A	484	44.128	58.789	90.738	1.00 21.84
ATOM	3845	O	ASN	A	484	44.723	59.343	89.827	1.00 20.30
ATOM	3846	CB	ASN	A	484	44.110	60.036	92.891	1.00 34.83
ATOM	3847	CG	ASN	A	484	45.382	60.719	92.449	1.00100.00
ATOM	3848	OD1	ASN	A	484	45.345	61.686	91.662	1.00 87.99
ATOM	3849	ND2	ASN	A	484	46.510	60.200	92.946	1.00100.00
ATOM	3850	N	SER	A	485	44.183	57.510	90.918	1.00 17.69
ATOM	3851	CA	SER	A	485	44.986	56.711	90.020	1.00 19.64
ATOM	3852	C	SER	A	485	44.283	56.335	88.728	1.00 22.88
ATOM	3853	O	SER	A	485	44.965	55.937	87.778	1.00 23.74
ATOM	3854	CB	SER	A	485	45.543	55.508	90.752	1.00 26.03
ATOM	3855	OG	SER	A	485	45.864	55.954	92.057	1.00 52.22
ATOM	3856	N	PHE	A	486	42.948	56.451	88.650	1.00 15.68
ATOM	3857	CA	PHE	A	486	42.367	56.105	87.371	1.00 17.12
ATOM	3858	C	PHE	A	486	42.879	57.120	86.403	1.00 16.98
ATOM	3859	O	PHE	A	486	43.165	58.236	86.812	1.00 15.87
ATOM	3860	CB	PHE	A	486	40.827	56.088	87.376	1.00 18.47
ATOM	3861	CG	PHE	A	486	40.270	54.950	88.181	1.00 17.85
ATOM	3862	CD1	PHE	A	486	40.325	53.646	87.686	1.00 17.48
ATOM	3863	CD2	PHE	A	486	39.669	55.169	89.423	1.00 19.85
ATOM	3864	CE1	PHE	A	486	39.790	52.599	88.441	1.00 18.74
ATOM	3865	CE2	PHE	A	486	39.119	54.139	90.189	1.00 19.10
ATOM	3866	CZ	PHE	A	486	39.208	52.839	89.689	1.00 17.75
ATOM	3867	N	ASN	A	487	42.965	56.744	85.140	1.00 16.22
ATOM	3868	CA	ASN	A	487	43.499	57.636	84.141	1.00 20.09
ATOM	3869	C	ASN	A	487	43.100	57.184	82.746	1.00 23.67
ATOM	3870	O	ASN	A	487	42.770	56.024	82.522	1.00 22.60
ATOM	3871	CB	ASN	A	487	45.058	57.575	84.255	1.00 21.63
ATOM	3872	CG	ASN	A	487	45.776	58.616	83.415	1.00 32.80
ATOM	3873	OD1	ASN	A	487	45.901	58.498	82.202	1.00 29.22
ATOM	3874	ND2	ASN	A	487	46.159	59.725	84.021	1.00 31.52
ATOM	3875	N	ALA	A	488	43.145	58.126	81.800	1.00 23.87
ATOM	3876	CA	ALA	A	488	42.808	57.829	80.411	1.00 24.07
ATOM	3877	C	ALA	A	488	43.673	56.703	79.873	1.00 30.63
ATOM	3878	O	ALA	A	488	43.336	55.962	78.958	1.00 33.83
ATOM	3879	CB	ALA	A	488	42.978	59.086	79.574	1.00 26.14
ATOM	3880	N	THR	A	489	44.835	56.532	80.467	1.00 25.63
ATOM	3881	CA	THR	A	489	45.666	55.468	79.987	1.00 22.82
ATOM	3882	C	THR	A	489	44.976	54.168	80.210	1.00 24.75
ATOM	3883	O	THR	A	489	45.323	53.163	79.615	1.00 26.26
ATOM	3884	CB	THR	A	489	47.017	55.459	80.691	1.00 29.64
ATOM	3885	OG1	THR	A	489	46.814	55.537	82.076	1.00 29.43
ATOM	3886	CG2	THR	A	489	47.774	56.684	80.231	1.00 35.78
ATOM	3887	N	ASP	A	490	43.999	54.180	81.097	1.00 21.60
ATOM	3888	CA	ASP	A	490	43.288	52.946	81.362	1.00 20.54
ATOM	3889	C	ASP	A	490	42.628	52.391	80.104	1.00 14.90
ATOM	3890	O	ASP	A	490	42.363	51.207	80.013	1.00 18.94

ATOM	3891	CB	ASP	A	490	42.188	53.100	82.462	1.00 18.42
ATOM	3892	CG	ASP	A	490	42.764	53.483	83.785	1.00 21.60
ATOM	3893	OD1	ASP	A	490	43.865	53.165	84.170	1.00 22.97
ATOM	3894	OD2	ASP	A	490	41.930	54.124	84.534	1.00 18.24
ATOM	3895	N	LEU	A	491	42.309	53.262	79.180	1.00 14.42
ATOM	3896	CA	LEU	A	491	41.571	52.910	77.971	1.00 18.63
ATOM	3897	C	LEU	A	491	42.404	52.634	76.735	1.00 26.17
ATOM	3898	O	LEU	A	491	41.863	52.350	75.689	1.00 23.53
ATOM	3899	CB	LEU	A	491	40.626	54.065	77.600	1.00 16.48
ATOM	3900	CG	LEU	A	491	39.793	54.553	78.786	1.00 17.62
ATOM	3901	CD1	LEU	A	491	38.719	55.504	78.256	1.00 18.61
ATOM	3902	CD2	LEU	A	491	39.164	53.341	79.481	1.00 10.99
ATOM	3903	N	LYS	A	492	43.697	52.773	76.906	1.00 25.72
ATOM	3904	CA	LYS	A	492	44.773	52.625	75.944	1.00 29.38
ATOM	3905	C	LYS	A	492	44.601	51.464	74.987	1.00 26.62
ATOM	3906	O	LYS	A	492	44.640	51.598	73.769	1.00 25.36
ATOM	3907	CB	LYS	A	492	46.051	52.369	76.768	1.00 39.68
ATOM	3908	CG	LYS	A	492	47.400	52.731	76.164	1.00 74.03
ATOM	3909	CD	LYS	A	492	48.535	52.573	77.175	1.00 92.88
ATOM	3910	CE	LYS	A	492	49.162	51.184	77.249	1.00100.00
ATOM	3911	NZ	LYS	A	492	50.629	51.214	77.397	1.00100.00
ATOM	3912	N	ASP	A	493	44.504	50.271	75.514	1.00 22.05
ATOM	3913	CA	ASP	A	493	44.400	49.213	74.525	1.00 25.28
ATOM	3914	C	ASP	A	493	43.008	48.604	74.421	1.00 31.85
ATOM	3915	O	ASP	A	493	42.844	47.411	74.178	1.00 31.64
ATOM	3916	CB	ASP	A	493	45.414	48.126	74.874	1.00 30.29
ATOM	3917	CG	ASP	A	493	46.803	48.680	74.973	1.00 47.27
ATOM	3918	OD1	ASP	A	493	47.322	49.280	74.036	1.00 49.99
ATOM	3919	OD2	ASP	A	493	47.334	48.481	76.167	1.00 45.03
ATOM	3920	N	LEU	A	494	41.989	49.430	74.622	1.00 23.95
ATOM	3921	CA	LEU	A	494	40.633	48.920	74.576	1.00 19.08
ATOM	3922	C	LEU	A	494	39.939	49.350	73.295	1.00 21.27
ATOM	3923	O	LEU	A	494	39.960	50.537	72.963	1.00 22.24
ATOM	3924	CB	LEU	A	494	39.833	49.421	75.800	1.00 16.85
ATOM	3925	CG	LEU	A	494	40.346	48.949	77.145	1.00 19.46
ATOM	3926	CD1	LEU	A	494	39.307	49.363	78.182	1.00 18.39
ATOM	3927	CD2	LEU	A	494	40.511	47.422	77.183	1.00 20.77
ATOM	3928	N	SER	A	495	39.320	48.401	72.573	1.00 17.36
ATOM	3929	CA	SER	A	495	38.594	48.790	71.382	1.00 16.04
ATOM	3930	C	SER	A	495	37.256	49.395	71.854	1.00 16.87
ATOM	3931	O	SER	A	495	36.902	49.328	73.042	1.00 13.30
ATOM	3932	CB	SER	A	495	38.253	47.547	70.576	1.00 16.67
ATOM	3933	OG	SER	A	495	37.477	46.701	71.422	1.00 17.37
ATOM	3934	N	SER	A	496	36.496	49.950	70.922	1.00 14.14
ATOM	3935	CA	SER	A	496	35.200	50.501	71.254	1.00 16.64
ATOM	3936	C	SER	A	496	34.316	49.365	71.794	1.00 17.90
ATOM	3937	O	SER	A	496	33.495	49.589	72.680	1.00 16.25
ATOM	3938	CB	SER	A	496	34.553	51.190	70.050	1.00 17.35
ATOM	3939	OG	SER	A	496	34.309	50.183	69.105	1.00 23.79
ATOM	3940	N	HIS	A	497	34.522	48.136	71.274	1.00 15.34
ATOM	3941	CA	HIS	A	497	33.794	46.965	71.729	1.00 13.46
ATOM	3942	C	HIS	A	497	33.999	46.671	73.224	1.00 17.45
ATOM	3943	O	HIS	A	497	33.120	46.277	73.992	1.00 17.69
ATOM	3944	CB	HIS	A	497	34.211	45.761	70.874	1.00 13.79
ATOM	3945	CG	HIS	A	497	33.804	46.004	69.470	1.00 20.43
ATOM	3946	ND1	HIS	A	497	34.738	46.342	68.482	1.00 24.52
ATOM	3947	CD2	HIS	A	497	32.551	46.044	68.930	1.00 21.08
ATOM	3948	CE1	HIS	A	497	34.039	46.531	67.358	1.00 21.87
ATOM	3949	NE2	HIS	A	497	32.725	46.363	67.602	1.00 23.02
ATOM	3950	N	GLN	A	498	35.230	46.833	73.662	1.00 14.00
ATOM	3951	CA	GLN	A	498	35.633	46.593	75.029	1.00 10.78
ATOM	3952	C	GLN	A	498	35.180	47.697	75.968	1.00 13.63
ATOM	3953	O	GLN	A	498	34.829	47.449	77.118	1.00 13.35
ATOM	3954	CB	GLN	A	498	37.156	46.416	75.038	1.00 11.59

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ATOM   3955  CG  GLN A 498      37.585  45.026  74.488  1.00 14.99
ATOM   3956  CD  GLN A 498      39.101  44.938  74.454  1.00 21.92
ATOM   3957  OE1 GLN A 498      39.746  45.833  73.897  1.00 18.12
ATOM   3958  NE2 GLN A 498      39.685  43.957  75.117  1.00 11.55
ATOM   3959  N   LEU A 499      35.200  48.942  75.490  1.00 16.63
ATOM   3960  CA  LEU A 499      34.712  50.095  76.273  1.00 18.30
ATOM   3961  C   LEU A 499      33.222  49.848  76.647  1.00 18.08
ATOM   3962  O   LEU A 499      32.711  50.004  77.782  1.00 14.69
ATOM   3963  CB  LEU A 499      34.719  51.296  75.293  1.00 19.02
ATOM   3964  CG  LEU A 499      35.650  52.421  75.677  1.00 28.28
ATOM   3965  CD1 LEU A 499      36.768  51.856  76.527  1.00 27.69
ATOM   3966  CD2 LEU A 499      36.210  53.135  74.448  1.00 31.77
ATOM   3967  N   ASN A 500      32.491  49.430  75.610  1.00 11.59
ATOM   3968  CA  ASN A 500      31.084  49.123  75.748  1.00 10.98
ATOM   3969  C   ASN A 500      30.844  48.021  76.775  1.00 11.55
ATOM   3970  O   ASN A 500      29.989  48.125  77.656  1.00 13.43
ATOM   3971  CB  ASN A 500      30.530  48.735  74.355  1.00 11.90
ATOM   3972  CG  ASN A 500      29.020  48.504  74.328  1.00 26.05
ATOM   3973  OD1 ASN A 500      28.208  49.304  74.815  1.00 19.55
ATOM   3974  ND2 ASN A 500      28.607  47.387  73.759  1.00 21.02
ATOM   3975  N   GLU A 501      31.601  46.927  76.633  1.00 11.18
ATOM   3976  CA  GLU A 501      31.471  45.787  77.537  1.00 11.00
ATOM   3977  C   GLU A 501      31.859  46.184  78.954  1.00 14.40
ATOM   3978  O   GLU A 501      31.266  45.757  79.930  1.00 13.70
ATOM   3979  CB  GLU A 501      32.286  44.574  77.022  1.00 13.23
ATOM   3980  CG  GLU A 501      32.328  43.425  78.064  1.00 12.24
ATOM   3981  CD  GLU A 501      30.930  42.880  78.253  1.00 20.51
ATOM   3982  OE1 GLU A 501      30.040  43.113  77.452  1.00 18.75
ATOM   3983  OE2 GLU A 501      30.747  42.158  79.338  1.00 16.17
ATOM   3984  N   PHE A 502      32.876  47.051  79.080  1.00 10.99
ATOM   3985  CA  PHE A 502      33.281  47.530  80.382  1.00 12.47
ATOM   3986  C   PHE A 502      32.095  48.241  81.068  1.00 12.80
ATOM   3987  O   PHE A 502      31.733  48.062  82.230  1.00 11.74
ATOM   3988  CB  PHE A 502      34.498  48.490  80.167  1.00 14.11
ATOM   3989  CG  PHE A 502      34.641  49.500  81.265  1.00 11.76
ATOM   3990  CD1 PHE A 502      34.958  49.120  82.570  1.00  9.77
ATOM   3991  CD2 PHE A 502      34.363  50.847  81.040  1.00 17.45
ATOM   3992  CE1 PHE A 502      35.059  50.053  83.605  1.00 12.88
ATOM   3993  CE2 PHE A 502      34.443  51.799  82.063  1.00 20.32
ATOM   3994  CZ  PHE A 502      34.812  51.406  83.350  1.00 16.55
ATOM   3995  N   LEU A 503      31.470  49.100  80.286  1.00 10.48
ATOM   3996  CA  LEU A 503      30.342  49.835  80.759  1.00 11.84
ATOM   3997  C   LEU A 503      29.184  48.917  81.089  1.00 11.65
ATOM   3998  O   LEU A 503      28.531  49.077  82.110  1.00 14.41
ATOM   3999  CB  LEU A 503      29.974  50.854  79.668  1.00 12.15
ATOM   4000  CG  LEU A 503      30.872  52.105  79.668  1.00 12.97
ATOM   4001  CD1 LEU A 503      30.572  52.957  78.438  1.00  9.62
ATOM   4002  CD2 LEU A 503      30.614  52.935  80.936  1.00 14.08
ATOM   4003  N   ALA A 504      28.947  47.910  80.248  1.00 12.65
ATOM   4004  CA  ALA A 504      27.850  46.977  80.499  1.00  8.77
ATOM   4005  C   ALA A 504      28.038  46.282  81.812  1.00 12.09
ATOM   4006  O   ALA A 504      27.118  46.081  82.598  1.00 10.26
ATOM   4007  CB  ALA A 504      27.742  45.965  79.370  1.00  7.47
ATOM   4008  N   GLN A 505      29.280  45.900  82.035  1.00 12.47
ATOM   4009  CA  GLN A 505      29.609  45.209  83.271  1.00 12.94
ATOM   4010  C   GLN A 505      29.424  46.144  84.484  1.00 14.71
ATOM   4011  O   GLN A 505      28.902  45.773  85.566  1.00 13.04
ATOM   4012  CB  GLN A 505      31.068  44.689  83.183  1.00 14.37
ATOM   4013  CG  GLN A 505      31.243  43.520  82.174  1.00 17.48
ATOM   4014  CD  GLN A 505      32.693  43.054  82.089  1.00 20.84
ATOM   4015  OE1 GLN A 505      33.556  43.462  82.890  1.00 21.65
ATOM   4016  NE2 GLN A 505      32.990  42.221  81.096  1.00 16.13
ATOM   4017  N   THR A 506      29.862  47.389  84.298  1.00 13.56
ATOM   4018  CA  THR A 506      29.749  48.348  85.373  1.00 15.13
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ATOM   4019  C   THR A 506      28.280  48.610  85.714  1.00 17.30
ATOM   4020  O   THR A 506      27.835  48.662  86.879  1.00 13.71
ATOM   4021  CB  THR A 506      30.561  49.613  85.043  1.00 13.74
ATOM   4022  OG1 THR A 506      31.903  49.243  84.853  1.00 13.66
ATOM   4023  CG2 THR A 506      30.542  50.538  86.242  1.00 16.98
ATOM   4024  N   LEU A 507      27.532  48.734  84.636  1.00 15.17
ATOM   4025  CA  LEU A 507      26.109  49.007  84.748  1.00 15.46
ATOM   4026  C   LEU A 507      25.391  47.944  85.517  1.00 15.53
ATOM   4027  O   LEU A 507      24.464  48.230  86.256  1.00 14.10
ATOM   4028  CB  LEU A 507      25.476  49.185  83.351  1.00 16.26
ATOM   4029  CG  LEU A 507      24.017  49.581  83.374  1.00 17.96
ATOM   4030  CD1 LEU A 507      23.801  50.929  84.087  1.00 12.71
ATOM   4031  CD2 LEU A 507      23.550  49.633  81.923  1.00 13.10
ATOM   4032  N   GLN A 508      25.802  46.696  85.343  1.00 14.24
ATOM   4033  CA  GLN A 508      25.145  45.630  86.077  1.00 11.70
ATOM   4034  C   GLN A 508      25.264  45.846  87.581  1.00 19.07
ATOM   4035  O   GLN A 508      24.521  45.269  88.354  1.00 16.98
ATOM   4036  CB  GLN A 508      25.736  44.246  85.745  1.00 11.79
ATOM   4037  CG  GLN A 508      25.402  43.722  84.334  1.00 17.73
ATOM   4038  CD  GLN A 508      25.860  42.282  84.204  1.00 20.08
ATOM   4039  OE1 GLN A 508      26.960  41.972  84.695  1.00 23.98
ATOM   4040  NE2 GLN A 508      25.048  41.402  83.594  1.00 15.23
ATOM   4041  N   ARG A 509      26.217  46.639  88.053  1.00 17.16
ATOM   4042  CA  ARG A 509      26.332  46.847  89.498  1.00 12.26
ATOM   4043  C   ARG A 509      25.960  48.279  89.899  1.00 17.09
ATOM   4044  O   ARG A 509      26.379  48.778  90.948  1.00 18.12
ATOM   4045  CB  ARG A 509      27.741  46.537  90.036  1.00 12.59
ATOM   4046  CG  ARG A 509      28.095  45.097  89.784  1.00 17.56
ATOM   4047  CD  ARG A 509      27.422  44.228  90.829  1.00 25.37
ATOM   4048  NE  ARG A 509      28.134  44.270  92.117  1.00 81.24
ATOM   4049  CZ  ARG A 509      29.377  43.822  92.417  1.00 88.85
ATOM   4050  NH1 ARG A 509      30.235  43.233  91.555  1.00 63.02
ATOM   4051  NH2 ARG A 509      29.779  43.978  93.676  1.00 42.33
ATOM   4052  N   ALA A 510      25.162  48.958  89.088  1.00 14.89
ATOM   4053  CA  ALA A 510      24.782  50.321  89.428  1.00 13.02
ATOM   4054  C   ALA A 510      23.824  50.270  90.594  1.00 22.66
ATOM   4055  O   ALA A 510      23.176  49.243  90.747  1.00 21.57
ATOM   4056  CB  ALA A 510      24.166  51.066  88.248  1.00 13.60
ATOM   4057  N   PRO A 511      23.755  51.340  91.417  1.00 20.55
ATOM   4058  CA  PRO A 511      24.521  52.568  91.190  1.00 16.50
ATOM   4059  C   PRO A 511      25.912  52.528  91.759  1.00 17.68
ATOM   4060  O   PRO A 511      26.199  51.765  92.658  1.00 15.20
ATOM   4061  CB  PRO A 511      23.836  53.667  92.001  1.00 15.68
ATOM   4062  CG  PRO A 511      23.118  52.916  93.106  1.00 22.23
ATOM   4063  CD  PRO A 511      22.859  51.497  92.597  1.00 18.77
ATOM   4064  N   LEU A 512      26.755  53.380  91.203  1.00 19.26
ATOM   4065  CA  LEU A 512      28.070  53.588  91.751  1.00 19.26
ATOM   4066  C   LEU A 512      27.964  54.919  92.529  1.00 19.35
ATOM   4067  O   LEU A 512      27.053  55.732  92.316  1.00 15.40
ATOM   4068  CB  LEU A 512      29.183  53.659  90.683  1.00 19.06
ATOM   4069  CG  LEU A 512      29.796  52.274  90.415  1.00 23.85
ATOM   4070  CD1 LEU A 512      28.762  51.351  89.763  1.00 24.14
ATOM   4071  CD2 LEU A 512      30.975  52.408  89.453  1.00 17.31
ATOM   4072  N   PRO A 513      28.880  55.157  93.459  1.00 18.91
ATOM   4073  CA  PRO A 513      28.823  56.408  94.168  1.00 16.34
ATOM   4074  C   PRO A 513      28.925  57.520  93.140  1.00 17.64
ATOM   4075  O   PRO A 513      29.686  57.443  92.192  1.00 15.39
ATOM   4076  CB  PRO A 513      30.031  56.431  95.107  1.00 16.06
ATOM   4077  CG  PRO A 513      30.443  54.972  95.246  1.00 21.97
ATOM   4078  CD  PRO A 513      29.960  54.270  93.987  1.00 17.15
ATOM   4079  N   LEU A 514      28.154  58.573  93.341  1.00 19.37
ATOM   4080  CA  LEU A 514      28.155  59.712  92.431  1.00 20.71
ATOM   4081  C   LEU A 514      29.567  60.240  92.151  1.00 22.73
ATOM   4082  O   LEU A 514      29.934  60.486  90.991  1.00 20.91
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ATOM   4083  CB  LEU A 514      27.209  60.816  92.955  1.00 19.46
ATOM   4084  CG  LEU A 514      27.173  62.058  92.077  1.00 23.47
ATOM   4085  CD1 LEU A 514      26.650  61.694  90.681  1.00 21.60
ATOM   4086  CD2 LEU A 514      26.275  63.087  92.767  1.00 19.09
ATOM   4087  N   GLY A 515      30.353  60.384  93.236  1.00 19.02
ATOM   4088  CA  GLY A 515      31.711  60.866  93.104  1.00 16.33
ATOM   4089  C   GLY A 515      32.489  60.000  92.121  1.00 20.68
ATOM   4090  O   GLY A 515      33.336  60.489  91.363  1.00 17.47
ATOM   4091  N   HIS A 516      32.199  58.691  92.105  1.00 16.69
ATOM   4092  CA  HIS A 516      32.961  57.829  91.206  1.00 16.67
ATOM   4093  C   HIS A 516      32.629  58.092  89.762  1.00 16.39
ATOM   4094  O   HIS A 516      33.485  58.094  88.886  1.00 13.40
ATOM   4095  CB  HIS A 516      32.781  56.335  91.479  1.00 16.85
ATOM   4096  CG  HIS A 516      33.328  55.909  92.786  1.00 23.07
ATOM   4097  ND1 HIS A 516      33.586  56.811  93.804  1.00 27.10
ATOM   4098  CD2 HIS A 516      33.691  54.664  93.219  1.00 26.55
ATOM   4099  CE1 HIS A 516      34.067  56.096  94.831  1.00 27.40
ATOM   4100  NE2 HIS A 516      34.144  54.803  94.514  1.00 26.59
ATOM   4101  N   ILE A 517      31.349  58.288  89.534  1.00 14.76
ATOM   4102  CA  ILE A 517      30.887  58.520  88.189  1.00 15.71
ATOM   4103  C   ILE A 517      31.444  59.817  87.666  1.00 13.62
ATOM   4104  O   ILE A 517      31.851  59.960  86.511  1.00 13.02
ATOM   4105  CB  ILE A 517      29.350  58.408  88.144  1.00 20.46
ATOM   4106  CG1 ILE A 517      28.925  56.989  88.555  1.00 23.97
ATOM   4107  CG2 ILE A 517      28.793  58.653  86.750  1.00 19.51
ATOM   4108  CD1 ILE A 517      29.636  55.831  87.826  1.00 21.92
ATOM   4109  N   LYS A 518      31.433  60.804  88.549  1.00 13.76
ATOM   4110  CA  LYS A 518      32.004  62.082  88.137  1.00 12.83
ATOM   4111  C   LYS A 518      33.487  61.877  87.759  1.00 17.13
ATOM   4112  O   LYS A 518      33.971  62.371  86.745  1.00 14.95
ATOM   4113  CB  LYS A 518      31.858  63.092  89.279  1.00 12.59
ATOM   4114  CG  LYS A 518      30.392  63.447  89.416  1.00 15.77
ATOM   4115  CD  LYS A 518      30.169  64.528  90.446  1.00 25.59
ATOM   4116  CE  LYS A 518      28.743  65.047  90.425  1.00 26.22
ATOM   4117  NZ  LYS A 518      28.669  66.440  90.886  1.00 26.75
ATOM   4118  N   ARG A 519      34.237  61.144  88.604  1.00 15.99
ATOM   4119  CA  ARG A 519      35.647  60.914  88.321  1.00 13.25
ATOM   4120  C   ARG A 519      35.803  60.213  86.998  1.00 16.26
ATOM   4121  O   ARG A 519      36.679  60.478  86.216  1.00 13.50
ATOM   4122  CB  ARG A 519      36.265  60.075  89.423  1.00 14.16
ATOM   4123  CG  ARG A 519      37.741  59.741  89.216  1.00 13.79
ATOM   4124  CD  ARG A 519      38.685  60.955  89.134  1.00 22.42
ATOM   4125  NE  ARG A 519      40.127  60.613  89.069  1.00 17.77
ATOM   4126  CZ  ARG A 519      41.035  61.432  88.570  1.00 19.26
ATOM   4127  NH1 ARG A 519      40.692  62.640  88.087  1.00 18.57
ATOM   4128  NH2 ARG A 519      42.289  61.014  88.549  1.00 17.51
ATOM   4129  N   MET A 520      34.897  59.292  86.743  1.00 13.85
ATOM   4130  CA  MET A 520      34.944  58.548  85.514  1.00 13.32
ATOM   4131  C   MET A 520      34.803  59.460  84.299  1.00 16.61
ATOM   4132  O   MET A 520      35.461  59.286  83.279  1.00 15.39
ATOM   4133  CB  MET A 520      33.860  57.425  85.585  1.00 15.92
ATOM   4134  CG  MET A 520      33.887  56.502  84.369  1.00 16.73
ATOM   4135  SD  MET A 520      32.699  55.131  84.463  1.00 19.40
ATOM   4136  CE  MET A 520      33.250  54.267  85.942  1.00 17.31
ATOM   4137  N   GLN A 521      33.919  60.449  84.358  1.00 10.96
ATOM   4138  CA  GLN A 521      33.800  61.336  83.205  1.00 10.25
ATOM   4139  C   GLN A 521      35.105  62.160  83.122  1.00 14.21
ATOM   4140  O   GLN A 521      35.684  62.487  82.073  1.00 11.43
ATOM   4141  CB  GLN A 521      32.548  62.237  83.376  1.00  9.22
ATOM   4142  CG  GLN A 521      32.547  63.519  82.503  1.00 12.68
ATOM   4143  CD  GLN A 521      32.758  63.301  81.025  1.00 18.23
ATOM   4144  OE1 GLN A 521      33.271  64.187  80.309  1.00 20.20
ATOM   4145  NE2 GLN A 521      32.453  62.102  80.554  1.00 10.43
ATOM   4146  N   GLU A 522      35.608  62.524  84.295  1.00 15.29
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ATOM   4147  CA  GLU A 522      36.816  63.335  84.345  1.00 14.86
ATOM   4148  C   GLU A 522      38.026  62.632  83.702  1.00 24.87
ATOM   4149  O   GLU A 522      38.848  63.232  82.990  1.00 19.95
ATOM   4150  CB  GLU A 522      37.068  63.573  85.820  1.00 15.93
ATOM   4151  CG  GLU A 522      38.175  64.573  86.121  1.00 34.79
ATOM   4152  CD  GLU A 522      38.013  64.959  87.556  1.00 61.54
ATOM   4153  OE1 GLU A 522      38.436  64.271  88.466  1.00 24.02
ATOM   4154  OE2 GLU A 522      37.252  66.014  87.710  1.00 60.58
ATOM   4155  N   VAL A 523      38.179  61.338  83.966  1.00 17.81
ATOM   4156  CA  VAL A 523      39.302  60.635  83.392  1.00 17.49
ATOM   4157  C   VAL A 523      39.081  60.051  81.994  1.00 17.20
ATOM   4158  O   VAL A 523      40.038  59.940  81.230  1.00 22.12
ATOM   4159  CB  VAL A 523      39.952  59.621  84.340  1.00 18.80
ATOM   4160  CG1 VAL A 523      40.427  60.324  85.613  1.00 18.67
ATOM   4161  CG2 VAL A 523      38.957  58.522  84.717  1.00 17.30
ATOM   4162  N   TYR A 524      37.851  59.676  81.633  1.00 13.33
ATOM   4163  CA  TYR A 524      37.638  59.045  80.331  1.00 12.09
ATOM   4164  C   TYR A 524      36.842  59.839  79.321  1.00 19.77
ATOM   4165  O   TYR A 524      36.720  59.417  78.179  1.00 17.94
ATOM   4166  CB  TYR A 524      36.961  57.656  80.463  1.00 13.83
ATOM   4167  CG  TYR A 524      37.615  56.667  81.421  1.00 14.86
ATOM   4168  CD1 TYR A 524      38.999  56.608  81.574  1.00 13.07
ATOM   4169  CD2 TYR A 524      36.832  55.761  82.146  1.00 19.57
ATOM   4170  CE1 TYR A 524      39.592  55.704  82.460  1.00 18.13
ATOM   4171  CE2 TYR A 524      37.403  54.832  83.019  1.00 18.46
ATOM   4172  CZ  TYR A 524      38.790  54.813  83.181  1.00 17.58
ATOM   4173  OH  TYR A 524      39.360  53.937  84.087  1.00 16.81
ATOM   4174  N   ASN A 525      36.235  60.940  79.753  1.00 20.91
ATOM   4175  CA  ASN A 525      35.435  61.755  78.865  1.00 16.88
ATOM   4176  C   ASN A 525      34.488  60.923  78.018  1.00 18.05
ATOM   4177  O   ASN A 525      34.450  61.014  76.789  1.00 15.92
ATOM   4178  CB  ASN A 525      36.361  62.615  78.002  1.00 13.81
ATOM   4179  CG  ASN A 525      35.680  63.751  77.259  1.00 18.94
ATOM   4180  OD1 ASN A 525      36.243  64.268  76.280  1.00 18.98
ATOM   4181  ND2 ASN A 525      34.502  64.169  77.693  1.00 14.31
ATOM   4182  N   PHE A 526      33.659  60.120  78.683  1.00 14.70
ATOM   4183  CA  PHE A 526      32.676  59.337  77.947  1.00 12.71
ATOM   4184  C   PHE A 526      31.596  60.234  77.380  1.00 16.60
ATOM   4185  O   PHE A 526      30.891  59.866  76.439  1.00 15.88
ATOM   4186  CB  PHE A 526      32.038  58.303  78.876  1.00 14.35
ATOM   4187  CG  PHE A 526      32.957  57.130  79.130  1.00 15.85
ATOM   4188  CD1 PHE A 526      33.895  56.735  78.175  1.00 19.68
ATOM   4189  CD2 PHE A 526      32.876  56.397  80.314  1.00 16.85
ATOM   4190  CE1 PHE A 526      34.687  55.604  78.378  1.00 21.64
ATOM   4191  CE2 PHE A 526      33.698  55.298  80.567  1.00 19.90
ATOM   4192  CZ  PHE A 526      34.590  54.890  79.575  1.00 18.31
ATOM   4193  N   ASN A 527      31.418  61.433  77.949  1.00 12.75
ATOM   4194  CA  ASN A 527      30.391  62.355  77.446  1.00 12.28
ATOM   4195  C   ASN A 527      30.627  62.668  75.971  1.00 19.85
ATOM   4196  O   ASN A 527      29.715  62.907  75.185  1.00 18.13
ATOM   4197  CB  ASN A 527      30.431  63.713  78.160  1.00 13.86
ATOM   4198  CG  ASN A 527      29.641  63.696  79.434  1.00 25.14
ATOM   4199  OD1 ASN A 527      29.760  64.600  80.250  1.00 20.32
ATOM   4200  ND2 ASN A 527      28.830  62.668  79.610  1.00 10.82
ATOM   4201  N   ALA A 528      31.906  62.668  75.607  1.00 15.34
ATOM   4202  CA  ALA A 528      32.280  62.964  74.264  1.00 17.72
ATOM   4203  C   ALA A 528      32.075  61.861  73.228  1.00 26.48
ATOM   4204  O   ALA A 528      32.198  62.127  72.031  1.00 21.26
ATOM   4205  CB  ALA A 528      33.729  63.372  74.236  1.00 18.38
ATOM   4206  N   ILE A 529      31.810  60.629  73.664  1.00 19.00
ATOM   4207  CA  ILE A 529      31.690  59.524  72.731  1.00 15.58
ATOM   4208  C   ILE A 529      30.389  59.499  71.945  1.00 15.90
ATOM   4209  O   ILE A 529      29.305  59.561  72.494  1.00 16.45
ATOM   4210  CB  ILE A 529      31.946  58.208  73.454  1.00 17.38
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ATOM   4211  CG1 ILE A 529      33.456  58.159  73.709  1.00 19.42
ATOM   4212  CG2 ILE A 529      31.511  57.103  72.488  1.00 17.67
ATOM   4213  CD1 ILE A 529      34.027  57.047  74.576  1.00 23.37
ATOM   4214  N   ASN A 530      30.440  59.418  70.641  1.00 16.94
ATOM   4215  CA  ASN A 530      29.151  59.417  69.969  1.00 20.74
ATOM   4216  C   ASN A 530      28.522  58.081  69.611  1.00 25.19
ATOM   4217  O   ASN A 530      27.369  58.026  69.217  1.00 23.63
ATOM   4218  CB  ASN A 530      28.937  60.566  68.986  1.00 39.14
ATOM   4219  CG  ASN A 530      28.612  61.852  69.749  1.00 80.92
ATOM   4220  OD1 ASN A 530      27.639  61.959  70.533  1.00 86.83
ATOM   4221  ND2 ASN A 530      29.470  62.838  69.537  1.00 45.14
ATOM   4222  N   ASN A 531      29.306  57.019  69.759  1.00 19.99
ATOM   4223  CA  ASN A 531      28.875  55.667  69.494  1.00 18.88
ATOM   4224  C   ASN A 531      27.637  55.452  70.350  1.00 15.67
ATOM   4225  O   ASN A 531      27.671  55.661  71.566  1.00 15.13
ATOM   4226  CB  ASN A 531      30.045  54.762  69.928  1.00 11.62
ATOM   4227  CG  ASN A 531      29.705  53.292  69.866  1.00 26.73
ATOM   4228  OD1 ASN A 531      28.724  52.832  70.471  1.00 21.97
ATOM   4229  ND2 ASN A 531      30.510  52.554  69.105  1.00 18.28
ATOM   4230  N   SER A 532      26.551  55.074  69.715  1.00 12.93
ATOM   4231  CA  SER A 532      25.293  54.931  70.456  1.00 15.99
ATOM   4232  C   SER A 532      25.248  53.889  71.565  1.00 17.50
ATOM   4233  O   SER A 532      24.631  54.066  72.611  1.00 20.47
ATOM   4234  CB  SER A 532      24.088  54.846  69.518  1.00 17.43
ATOM   4235  OG  SER A 532      24.274  53.791  68.570  1.00 24.83
ATOM   4236  N   GLU A 533      25.876  52.753  71.337  1.00 14.65
ATOM   4237  CA  GLU A 533      25.835  51.708  72.339  1.00 13.13
ATOM   4238  C   GLU A 533      26.497  52.181  73.614  1.00 19.42
ATOM   4239  O   GLU A 533      25.964  52.028  74.725  1.00 15.25
ATOM   4240  CB  GLU A 533      26.547  50.464  71.780  1.00 13.22
ATOM   4241  CG  GLU A 533      25.712  49.829  70.637  1.00  9.87
ATOM   4242  CD  GLU A 533      24.531  49.055  71.162  1.00 21.99
ATOM   4243  OE1 GLU A 533      24.395  48.722  72.319  1.00 18.49
ATOM   4244  OE2 GLU A 533      23.625  48.805  70.267  1.00 16.24
ATOM   4245  N   ILE A 534      27.686  52.747  73.415  1.00 15.22
ATOM   4246  CA  ILE A 534      28.495  53.265  74.512  1.00 14.94
ATOM   4247  C   ILE A 534      27.793  54.420  75.228  1.00 14.04
ATOM   4248  O   ILE A 534      27.677  54.447  76.461  1.00 17.42
ATOM   4249  CB  ILE A 534      29.926  53.655  74.077  1.00 17.98
ATOM   4250  CG1 ILE A 534      30.733  52.461  73.557  1.00 13.41
ATOM   4251  CG2 ILE A 534      30.680  54.387  75.216  1.00 15.34
ATOM   4252  CD1 ILE A 534      32.003  52.906  72.825  1.00 17.39
ATOM   4253  N   ARG A 535      27.310  55.402  74.475  1.00 14.39
ATOM   4254  CA  ARG A 535      26.611  56.511  75.135  1.00 17.35
ATOM   4255  C   ARG A 535      25.347  56.016  75.868  1.00 14.54
ATOM   4256  O   ARG A 535      24.998  56.382  76.973  1.00 15.05
ATOM   4257  CB  ARG A 535      26.232  57.576  74.108  1.00 16.26
ATOM   4258  CG  ARG A 535      25.583  58.826  74.730  1.00  8.73
ATOM   4259  CD  ARG A 535      25.392  59.919  73.666  1.00 11.55
ATOM   4260  NE  ARG A 535      25.126  61.228  74.251  1.00 15.18
ATOM   4261  CZ  ARG A 535      26.049  62.043  74.761  1.00 26.20
ATOM   4262  NH1 ARG A 535      27.354  61.765  74.769  1.00 20.26
ATOM   4263  NH2 ARG A 535      25.636  63.189  75.286  1.00 19.91
ATOM   4264  N   PHE A 536      24.632  55.126  75.233  1.00 11.71
ATOM   4265  CA  PHE A 536      23.462  54.627  75.876  1.00  9.63
ATOM   4266  C   PHE A 536      23.825  54.092  77.233  1.00 13.77
ATOM   4267  O   PHE A 536      23.256  54.497  78.231  1.00 13.81
ATOM   4268  CB  PHE A 536      22.906  53.471  75.016  1.00 10.66
ATOM   4269  CG  PHE A 536      21.865  52.621  75.710  1.00 14.64
ATOM   4270  CD1 PHE A 536      20.699  53.158  76.256  1.00 13.81
ATOM   4271  CD2 PHE A 536      22.052  51.242  75.840  1.00 19.23
ATOM   4272  CE1 PHE A 536      19.762  52.325  76.877  1.00 14.23
ATOM   4273  CE2 PHE A 536      21.127  50.395  76.457  1.00 16.53
ATOM   4274  CZ  PHE A 536      19.960  50.945  76.984  1.00 11.63
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ATOM	4275	N	ARG	A	537	24.750	53.131	77.282	1.00 12.89
ATOM	4276	CA	ARG	A	537	25.110	52.536	78.577	1.00 11.92
ATOM	4277	C	ARG	A	537	25.734	53.520	79.575	1.00 16.03
ATOM	4278	O	ARG	A	537	25.525	53.436	80.793	1.00 10.71
ATOM	4279	CB	ARG	A	537	25.949	51.253	78.505	1.00 11.85
ATOM	4280	CG	ARG	A	537	25.274	50.113	77.776	1.00 8.59
ATOM	4281	CD	ARG	A	537	26.142	48.857	77.547	1.00 17.16
ATOM	4282	NE	ARG	A	537	25.233	47.845	76.992	1.00 16.12
ATOM	4283	CZ	ARG	A	537	24.869	47.824	75.716	1.00 25.23
ATOM	4284	NH1	ARG	A	537	25.414	48.641	74.802	1.00 13.55
ATOM	4285	NH2	ARG	A	537	23.946	46.947	75.356	1.00 16.52
ATOM	4286	N	TRP	A	538	26.544	54.451	79.060	1.00 13.16
ATOM	4287	CA	TRP	A	538	27.170	55.440	79.907	1.00 10.77
ATOM	4288	C	TRP	A	538	26.079	56.286	80.532	1.00 13.43
ATOM	4289	O	TRP	A	538	26.048	56.509	81.736	1.00 13.45
ATOM	4290	CB	TRP	A	538	28.036	56.318	78.996	1.00 12.97
ATOM	4291	CG	TRP	A	538	28.489	57.611	79.604	1.00 12.46
ATOM	4292	CD1	TRP	A	538	28.330	58.807	79.019	1.00 13.56
ATOM	4293	CD2	TRP	A	538	29.199	57.826	80.857	1.00 11.95
ATOM	4294	NE1	TRP	A	538	28.932	59.757	79.801	1.00 12.84
ATOM	4295	CE2	TRP	A	538	29.455	59.208	80.938	1.00 12.68
ATOM	4296	CE3	TRP	A	538	29.667	57.000	81.914	1.00 11.87
ATOM	4297	CZ2	TRP	A	538	30.115	59.780	82.024	1.00 10.55
ATOM	4298	CZ3	TRP	A	538	30.334	57.557	82.994	1.00 12.97
ATOM	4299	CH2	TRP	A	538	30.537	58.953	83.046	1.00 14.62
ATOM	4300	N	LEU	A	539	25.160	56.761	79.714	1.00 8.88
ATOM	4301	CA	LEU	A	539	24.132	57.592	80.310	1.00 11.52
ATOM	4302	C	LEU	A	539	23.249	56.878	81.335	1.00 17.64
ATOM	4303	O	LEU	A	539	22.775	57.470	82.308	1.00 15.29
ATOM	4304	CB	LEU	A	539	23.253	58.271	79.251	1.00 13.68
ATOM	4305	CG	LEU	A	539	23.977	59.247	78.323	1.00 15.24
ATOM	4306	CD1	LEU	A	539	22.989	59.923	77.388	1.00 13.27
ATOM	4307	CD2	LEU	A	539	24.693	60.312	79.121	1.00 13.80
ATOM	4308	N	ARG	A	540	22.988	55.583	81.115	1.00 14.05
ATOM	4309	CA	ARG	A	540	22.176	54.850	82.067	1.00 11.62
ATOM	4310	C	ARG	A	540	22.880	54.792	83.418	1.00 13.27
ATOM	4311	O	ARG	A	540	22.277	54.942	84.488	1.00 12.86
ATOM	4312	CB	ARG	A	540	21.883	53.426	81.584	1.00 12.88
ATOM	4313	CG	ARG	A	540	20.894	53.325	80.408	1.00 8.76
ATOM	4314	CD	ARG	A	540	20.453	51.857	80.281	1.00 14.08
ATOM	4315	NE	ARG	A	540	19.442	51.552	81.288	1.00 11.93
ATOM	4316	CZ	ARG	A	540	18.856	50.391	81.486	1.00 16.72
ATOM	4317	NH1	ARG	A	540	19.145	49.317	80.774	1.00 16.31
ATOM	4318	NH2	ARG	A	540	17.926	50.330	82.416	1.00 9.86
ATOM	4319	N	LEU	A	541	24.189	54.546	83.338	1.00 10.69
ATOM	4320	CA	LEU	A	541	25.036	54.432	84.526	1.00 9.89
ATOM	4321	C	LEU	A	541	25.017	55.712	85.353	1.00 12.38
ATOM	4322	O	LEU	A	541	24.961	55.749	86.598	1.00 12.85
ATOM	4323	CB	LEU	A	541	26.482	54.119	84.074	1.00 8.98
ATOM	4324	CG	LEU	A	541	27.519	53.986	85.194	1.00 13.06
ATOM	4325	CD1	LEU	A	541	27.144	52.889	86.196	1.00 11.30
ATOM	4326	CD2	LEU	A	541	28.904	53.697	84.606	1.00 11.15
ATOM	4327	N	CYS	A	542	25.097	56.800	84.603	1.00 14.91
ATOM	4328	CA	CYS	A	542	25.043	58.147	85.153	1.00 15.42
ATOM	4329	C	CYS	A	542	23.719	58.436	85.881	1.00 12.87
ATOM	4330	O	CYS	A	542	23.689	58.913	87.019	1.00 13.42
ATOM	4331	CB	CYS	A	542	25.234	59.166	83.987	1.00 14.29
ATOM	4332	SG	CYS	A	542	26.987	59.258	83.516	1.00 15.48
ATOM	4333	N	ILE	A	543	22.620	58.161	85.188	1.00 11.12
ATOM	4334	CA	ILE	A	543	21.287	58.388	85.723	1.00 12.92
ATOM	4335	C	ILE	A	543	21.034	57.514	86.912	1.00 15.64
ATOM	4336	O	ILE	A	543	20.565	57.959	87.965	1.00 14.40
ATOM	4337	CB	ILE	A	543	20.193	58.168	84.670	1.00 14.69
ATOM	4338	CG1	ILE	A	543	20.350	59.208	83.580	1.00 14.31

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ATOM   4339  CG2 ILE A 543      18.785  58.292  85.281  1.00 11.05
ATOM   4340  CD1 ILE A 543      20.139  60.651  84.095  1.00 13.56
ATOM   4341  N   GLN A 544      21.362  56.237  86.729  1.00 13.09
ATOM   4342  CA  GLN A 544      21.144  55.310  87.829  1.00 12.90
ATOM   4343  C   GLN A 544      22.017  55.629  89.015  1.00 16.30
ATOM   4344  O   GLN A 544      21.649  55.299  90.140  1.00 12.81
ATOM   4345  CB  GLN A 544      21.287  53.846  87.396  1.00 14.77
ATOM   4346  CG  GLN A 544      20.159  53.374  86.449  1.00 13.43
ATOM   4347  CD  GLN A 544      20.399  51.967  85.889  1.00 16.60
ATOM   4348  OE1 GLN A 544      20.048  51.639  84.754  1.00 18.63
ATOM   4349  NE2 GLN A 544      20.976  51.100  86.695  1.00  7.00
ATOM   4350  N   SER A 545      23.143  56.296  88.748  1.00 13.80
ATOM   4351  CA  SER A 545      24.058  56.712  89.799  1.00 13.01
ATOM   4352  C   SER A 545      23.715  58.091  90.368  1.00 17.51
ATOM   4353  O   SER A 545      24.429  58.656  91.189  1.00 17.76
ATOM   4354  CB  SER A 545      25.495  56.649  89.330  1.00 14.26
ATOM   4355  OG  SER A 545      25.735  55.273  89.138  1.00 15.74
ATOM   4356  N   LYS A 546      22.586  58.609  89.924  1.00 13.25
ATOM   4357  CA  LYS A 546      22.029  59.857  90.370  1.00 14.37
ATOM   4358  C   LYS A 546      22.771  61.109  89.963  1.00 16.71
ATOM   4359  O   LYS A 546      22.770  62.106  90.698  1.00 16.30
ATOM   4360  CB  LYS A 546      21.850  59.890  91.878  1.00 15.93
ATOM   4361  CG  LYS A 546      21.320  58.602  92.470  1.00 16.80
ATOM   4362  CD  LYS A 546      19.919  58.370  91.982  1.00 13.30
ATOM   4363  CE  LYS A 546      19.280  57.148  92.617  1.00 24.82
ATOM   4364  NZ  LYS A 546      18.052  56.742  91.905  1.00 17.92
ATOM   4365  N   TRP A 547      23.418  61.104  88.827  1.00 15.72
ATOM   4366  CA  TRP A 547      24.103  62.319  88.438  1.00 16.24
ATOM   4367  C   TRP A 547      23.132  63.246  87.727  1.00 18.78
ATOM   4368  O   TRP A 547      22.760  63.007  86.605  1.00 16.35
ATOM   4369  CB  TRP A 547      25.261  61.999  87.505  1.00 15.42
ATOM   4370  CG  TRP A 547      26.211  63.156  87.344  1.00 16.84
ATOM   4371  CD1 TRP A 547      26.177  64.386  87.949  1.00 18.62
ATOM   4372  CD2 TRP A 547      27.349  63.140  86.479  1.00 15.94
ATOM   4373  NE1 TRP A 547      27.267  65.115  87.543  1.00 16.22
ATOM   4374  CE2 TRP A 547      27.997  64.380  86.629  1.00 18.06
ATOM   4375  CE3 TRP A 547      27.900  62.159  85.647  1.00 16.57
ATOM   4376  CZ2 TRP A 547      29.186  64.662  85.928  1.00 16.68
ATOM   4377  CZ3 TRP A 547      29.068  62.459  84.966  1.00 19.03
ATOM   4378  CH2 TRP A 547      29.693  63.709  85.079  1.00 18.04
ATOM   4379  N   GLU A 548      22.706  64.327  88.376  1.00 13.95
ATOM   4380  CA  GLU A 548      21.745  65.238  87.780  1.00 13.21
ATOM   4381  C   GLU A 548      22.176  65.856  86.468  1.00 17.27
ATOM   4382  O   GLU A 548      21.352  66.149  85.617  1.00 18.18
ATOM   4383  CB  GLU A 548      21.375  66.370  88.771  1.00 15.29
ATOM   4384  CG  GLU A 548      20.751  65.878  90.109  1.00 19.42
ATOM   4385  CD  GLU A 548      20.207  67.018  90.953  1.00 33.00
ATOM   4386  OE1 GLU A 548      19.775  68.057  90.492  1.00 46.88
ATOM   4387  OE2 GLU A 548      20.224  66.791  92.239  1.00 30.89
ATOM   4388  N   ASP A 549      23.477  66.105  86.285  1.00 17.99
ATOM   4389  CA  ASP A 549      23.929  66.735  85.054  1.00 10.58
ATOM   4390  C   ASP A 549      23.666  65.896  83.853  1.00 12.02
ATOM   4391  O   ASP A 549      23.629  66.354  82.709  1.00 18.87
ATOM   4392  CB  ASP A 549      25.426  67.034  85.126  1.00 11.36
ATOM   4393  CG  ASP A 549      25.703  68.058  86.214  1.00 22.44
ATOM   4394  OD1 ASP A 549      25.396  69.227  86.150  1.00 25.44
ATOM   4395  OD2 ASP A 549      26.252  67.575  87.271  1.00 25.86
ATOM   4396  N   ALA A 550      23.511  64.624  84.122  1.00 13.24
ATOM   4397  CA  ALA A 550      23.269  63.709  83.004  1.00 14.70
ATOM   4398  C   ALA A 550      21.845  63.707  82.473  1.00 17.89
ATOM   4399  O   ALA A 550      21.598  63.132  81.389  1.00 15.28
ATOM   4400  CB  ALA A 550      23.713  62.280  83.335  1.00 14.77
ATOM   4401  N   ILE A 551      20.926  64.308  83.251  1.00 16.18
ATOM   4402  CA  ILE A 551      19.497  64.377  82.914  1.00 16.05
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ATOM   4403  C   ILE A 551      19.182  64.894  81.523  1.00 18.70
ATOM   4404  O   ILE A 551      18.441  64.290  80.736  1.00 19.01
ATOM   4405  CB  ILE A 551      18.701  65.139  83.971  1.00 19.52
ATOM   4406  CG1 ILE A 551      18.692  64.281  85.232  1.00 20.39
ATOM   4407  CG2 ILE A 551      17.251  65.361  83.512  1.00 12.65
ATOM   4408  CD1 ILE A 551      18.167  64.995  86.485  1.00 15.78
ATOM   4409  N   PRO A 552      19.748  66.038  81.197  1.00 18.48
ATOM   4410  CA  PRO A 552      19.487  66.600  79.888  1.00 16.36
ATOM   4411  C   PRO A 552      20.084  65.736  78.795  1.00 19.64
ATOM   4412  O   PRO A 552      19.551  65.606  77.700  1.00 16.94
ATOM   4413  CB  PRO A 552      20.125  67.995  79.870  1.00 18.41
ATOM   4414  CG  PRO A 552      21.001  68.070  81.116  1.00 24.69
ATOM   4415  CD  PRO A 552      20.504  66.981  82.059  1.00 17.97
ATOM   4416  N   LEU A 553      21.226  65.144  79.075  1.00 17.67
ATOM   4417  CA  LEU A 553      21.852  64.302  78.072  1.00 15.47
ATOM   4418  C   LEU A 553      20.940  63.101  77.795  1.00 19.23
ATOM   4419  O   LEU A 553      20.704  62.655  76.681  1.00 16.64
ATOM   4420  CB  LEU A 553      23.275  63.819  78.501  1.00 13.81
ATOM   4421  CG  LEU A 553      24.239  64.905  79.002  1.00 19.25
ATOM   4422  CD1 LEU A 553      25.606  64.289  79.247  1.00 17.04
ATOM   4423  CD2 LEU A 553      24.412  65.997  77.955  1.00 18.39
ATOM   4424  N   ALA A 554      20.440  62.529  78.867  1.00 17.65
ATOM   4425  CA  ALA A 554      19.614  61.341  78.730  1.00 15.25
ATOM   4426  C   ALA A 554      18.330  61.673  78.029  1.00 19.37
ATOM   4427  O   ALA A 554      17.896  60.913  77.157  1.00 14.92
ATOM   4428  CB  ALA A 554      19.415  60.697  80.094  1.00 12.41
ATOM   4429  N   LEU A 555      17.746  62.821  78.410  1.00 14.59
ATOM   4430  CA  LEU A 555      16.514  63.224  77.750  1.00 17.50
ATOM   4431  C   LEU A 555      16.686  63.445  76.249  1.00 16.25
ATOM   4432  O   LEU A 555      15.822  63.168  75.435  1.00 15.71
ATOM   4433  CB  LEU A 555      15.921  64.531  78.318  1.00 18.40
ATOM   4434  CG  LEU A 555      15.298  64.374  79.695  1.00 23.82
ATOM   4435  CD1 LEU A 555      15.153  65.771  80.333  1.00 23.08
ATOM   4436  CD2 LEU A 555      13.934  63.692  79.583  1.00 18.63
ATOM   4437  N   LYS A 556      17.827  64.008  75.899  1.00 17.73
ATOM   4438  CA  LYS A 556      18.139  64.330  74.536  1.00 15.70
ATOM   4439  C   LYS A 556      18.285  63.076  73.702  1.00 19.09
ATOM   4440  O   LYS A 556      17.690  62.959  72.626  1.00 19.08
ATOM   4441  CB  LYS A 556      19.380  65.206  74.530  1.00 15.52
ATOM   4442  CG  LYS A 556      19.729  65.769  73.163  1.00 41.74
ATOM   4443  CD  LYS A 556      21.020  66.590  73.160  1.00 77.82
ATOM   4444  CE  LYS A 556      21.851  66.449  71.883  1.00 79.74
ATOM   4445  NZ  LYS A 556      22.446  67.709  71.404  1.00 60.52
ATOM   4446  N   MET A 557      19.089  62.128  74.207  1.00 15.27
ATOM   4447  CA  MET A 557      19.294  60.904  73.446  1.00 13.47
ATOM   4448  C   MET A 557      17.997  60.140  73.264  1.00 16.45
ATOM   4449  O   MET A 557      17.723  59.507  72.253  1.00 15.63
ATOM   4450  CB  MET A 557      20.312  59.998  74.165  1.00 14.26
ATOM   4451  CG  MET A 557      20.499  58.682  73.405  1.00 13.00
ATOM   4452  SD  MET A 557      21.984  57.796  73.915  1.00 16.44
ATOM   4453  CE  MET A 557      22.027  56.574  72.596  1.00 12.39
ATOM   4454  N   ALA A 558      17.200  60.181  74.327  1.00 18.08
ATOM   4455  CA  ALA A 558      15.955  59.438  74.323  1.00 17.49
ATOM   4456  C   ALA A 558      14.968  59.922  73.292  1.00 23.08
ATOM   4457  O   ALA A 558      14.221  59.153  72.723  1.00 21.14
ATOM   4458  CB  ALA A 558      15.316  59.439  75.705  1.00 16.55
ATOM   4459  N   THR A 559      14.951  61.220  73.082  1.00 18.89
ATOM   4460  CA  THR A 559      13.980  61.798  72.186  1.00 19.50
ATOM   4461  C   THR A 559      14.542  62.125  70.830  1.00 22.12
ATOM   4462  O   THR A 559      13.804  62.219  69.862  1.00 23.28
ATOM   4463  CB  THR A 559      13.418  63.078  72.824  1.00 25.23
ATOM   4464  OG1 THR A 559      14.493  63.999  73.001  1.00 22.20
ATOM   4465  CG2 THR A 559      12.734  62.723  74.147  1.00 18.19
ATOM   4466  N   GLU A 560      15.841  62.316  70.756  1.00 16.68
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ATOM	4467	CA	GLU	A	560	16.399	62.646	69.479	1.00 18.60
ATOM	4468	C	GLU	A	560	16.492	61.448	68.545	1.00 26.45
ATOM	4469	O	GLU	A	560	16.714	61.608	67.344	1.00 21.93
ATOM	4470	CB	GLU	A	560	17.748	63.317	69.640	1.00 21.55
ATOM	4471	CG	GLU	A	560	17.623	64.757	70.136	1.00 38.31
ATOM	4472	CD	GLU	A	560	18.990	65.352	70.221	1.00 55.37
ATOM	4473	OE1	GLU	A	560	20.007	64.691	70.053	1.00 40.21
ATOM	4474	OE2	GLU	A	560	18.946	66.627	70.504	1.00 55.04
ATOM	4475	N	GLN	A	561	16.344	60.251	69.101	1.00 20.47
ATOM	4476	CA	GLN	A	561	16.340	59.043	68.291	1.00 19.24
ATOM	4477	C	GLN	A	561	15.283	58.189	68.921	1.00 18.06
ATOM	4478	O	GLN	A	561	14.874	58.520	70.022	1.00 16.87
ATOM	4479	CB	GLN	A	561	17.684	58.307	68.136	1.00 20.45
ATOM	4480	CG	GLN	A	561	18.341	58.001	69.495	1.00 21.17
ATOM	4481	CD	GLN	A	561	17.692	56.815	70.165	1.00 21.31
ATOM	4482	OE1	GLN	A	561	17.302	56.877	71.344	1.00 23.07
ATOM	4483	NE2	GLN	A	561	17.543	55.758	69.379	1.00 11.21
ATOM	4484	N	GLY	A	562	14.821	57.148	68.239	1.00 16.15
ATOM	4485	CA	GLY	A	562	13.758	56.367	68.827	1.00 14.79
ATOM	4486	C	GLY	A	562	13.919	54.872	68.750	1.00 17.42
ATOM	4487	O	GLY	A	562	12.941	54.134	68.842	1.00 22.06
ATOM	4488	N	ARG	A	563	15.152	54.424	68.598	1.00 18.35
ATOM	4489	CA	ARG	A	563	15.453	52.990	68.617	1.00 18.80
ATOM	4490	C	ARG	A	563	15.023	52.501	70.018	1.00 16.67
ATOM	4491	O	ARG	A	563	15.518	52.925	71.085	1.00 14.27
ATOM	4492	CB	ARG	A	563	16.949	52.812	68.321	1.00 16.78
ATOM	4493	CG	ARG	A	563	17.394	51.363	68.218	1.00 14.43
ATOM	4494	CD	ARG	A	563	18.911	51.276	68.095	1.00 15.41
ATOM	4495	NE	ARG	A	563	19.423	49.897	68.119	1.00 19.33
ATOM	4496	CZ	ARG	A	563	20.683	49.669	67.774	1.00 19.66
ATOM	4497	NH1	ARG	A	563	21.482	50.681	67.417	1.00 10.67
ATOM	4498	NH2	ARG	A	563	21.148	48.428	67.779	1.00 13.38
ATOM	4499	N	MET	A	564	14.003	51.648	70.069	1.00 13.84
ATOM	4500	CA	MET	A	564	13.447	51.247	71.369	1.00 13.05
ATOM	4501	C	MET	A	564	14.443	50.787	72.419	1.00 18.69
ATOM	4502	O	MET	A	564	14.257	50.973	73.628	1.00 12.40
ATOM	4503	CB	MET	A	564	12.315	50.212	71.198	1.00 13.81
ATOM	4504	CG	MET	A	564	11.159	50.825	70.424	1.00 16.20
ATOM	4505	SD	MET	A	564	9.692	49.805	70.530	1.00 21.23
ATOM	4506	CE	MET	A	564	10.114	48.581	69.265	1.00 17.64
ATOM	4507	N	LYS	A	565	15.464	50.097	71.892	1.00 16.37
ATOM	4508	CA	LYS	A	565	16.521	49.537	72.701	1.00 13.75
ATOM	4509	C	LYS	A	565	17.129	50.623	73.582	1.00 16.90
ATOM	4510	O	LYS	A	565	17.493	50.376	74.735	1.00 14.97
ATOM	4511	CB	LYS	A	565	17.549	48.885	71.767	1.00 11.37
ATOM	4512	CG	LYS	A	565	18.793	48.371	72.459	1.00 12.72
ATOM	4513	CD	LYS	A	565	19.962	48.100	71.525	1.00 17.72
ATOM	4514	CE	LYS	A	565	21.060	47.336	72.239	1.00 19.39
ATOM	4515	NZ	LYS	A	565	22.030	46.721	71.308	1.00 15.47
ATOM	4516	N	PHE	A	566	17.211	51.847	73.057	1.00 12.01
ATOM	4517	CA	PHE	A	566	17.801	52.912	73.846	1.00 12.25
ATOM	4518	C	PHE	A	566	16.739	53.770	74.509	1.00 15.74
ATOM	4519	O	PHE	A	566	16.843	54.177	75.661	1.00 12.91
ATOM	4520	CB	PHE	A	566	18.641	53.814	72.932	1.00 12.87
ATOM	4521	CG	PHE	A	566	19.744	53.117	72.165	1.00 14.44
ATOM	4522	CD1	PHE	A	566	20.465	52.053	72.714	1.00 13.84
ATOM	4523	CD2	PHE	A	566	20.111	53.577	70.894	1.00 15.31
ATOM	4524	CE1	PHE	A	566	21.510	51.434	72.014	1.00 13.86
ATOM	4525	CE2	PHE	A	566	21.145	52.977	70.172	1.00 14.39
ATOM	4526	CZ	PHE	A	566	21.849	51.910	70.744	1.00 15.76
ATOM	4527	N	THR	A	567	15.721	54.095	73.724	1.00 16.10
ATOM	4528	CA	THR	A	567	14.642	54.966	74.184	1.00 14.70
ATOM	4529	C	THR	A	567	13.876	54.518	75.423	1.00 14.32
ATOM	4530	O	THR	A	567	13.615	55.315	76.346	1.00 14.88

ATOM	4531	CB	THR	A	567	13.707	55.409	73.030	1.00 14.81
ATOM	4532	OG1	THR	A	567	14.465	56.204	72.148	1.00 15.28
ATOM	4533	CG2	THR	A	567	12.520	56.196	73.596	1.00 14.89
ATOM	4534	N	ARG	A	568	13.478	53.245	75.412	1.00 12.20
ATOM	4535	CA	ARG	A	568	12.697	52.764	76.533	1.00 13.57
ATOM	4536	C	ARG	A	568	13.393	52.797	77.876	1.00 14.85
ATOM	4537	O	ARG	A	568	12.896	53.312	78.861	1.00 14.39
ATOM	4538	CB	ARG	A	568	12.133	51.400	76.218	1.00 13.49
ATOM	4539	CG	ARG	A	568	11.021	51.467	75.155	1.00 14.02
ATOM	4540	CD	ARG	A	568	10.387	50.098	74.884	1.00 9.84
ATOM	4541	NE	ARG	A	568	9.662	49.607	76.063	1.00 13.61
ATOM	4542	CZ	ARG	A	568	9.236	48.368	76.197	1.00 17.32
ATOM	4543	NH1	ARG	A	568	9.471	47.427	75.275	1.00 13.23
ATOM	4544	NH2	ARG	A	568	8.566	48.053	77.293	1.00 13.32
ATOM	4545	N	PRO	A	569	14.577	52.237	77.948	1.00 12.95
ATOM	4546	CA	PRO	A	569	15.294	52.206	79.229	1.00 10.82
ATOM	4547	C	PRO	A	569	15.810	53.574	79.653	1.00 15.13
ATOM	4548	O	PRO	A	569	15.977	53.859	80.849	1.00 14.45
ATOM	4549	CB	PRO	A	569	16.479	51.262	79.000	1.00 14.29
ATOM	4550	CG	PRO	A	569	16.245	50.553	77.659	1.00 17.55
ATOM	4551	CD	PRO	A	569	15.224	51.385	76.897	1.00 16.15
ATOM	4552	N	LEU	A	570	16.069	54.462	78.685	1.00 15.08
ATOM	4553	CA	LEU	A	570	16.502	55.813	79.082	1.00 16.35
ATOM	4554	C	LEU	A	570	15.321	56.509	79.784	1.00 19.34
ATOM	4555	O	LEU	A	570	15.401	57.045	80.898	1.00 16.13
ATOM	4556	CB	LEU	A	570	16.944	56.615	77.840	1.00 16.51
ATOM	4557	CG	LEU	A	570	18.372	56.269	77.386	1.00 18.67
ATOM	4558	CD1	LEU	A	570	18.737	57.028	76.110	1.00 16.85
ATOM	4559	CD2	LEU	A	570	19.392	56.601	78.486	1.00 14.01
ATOM	4560	N	PHE	A	571	14.161	56.435	79.129	1.00 14.02
ATOM	4561	CA	PHE	A	571	12.978	57.007	79.732	1.00 14.67
ATOM	4562	C	PHE	A	571	12.684	56.323	81.054	1.00 18.94
ATOM	4563	O	PHE	A	571	12.257	56.933	82.030	1.00 18.09
ATOM	4564	CB	PHE	A	571	11.721	56.805	78.872	1.00 14.94
ATOM	4565	CG	PHE	A	571	11.462	57.993	78.014	1.00 17.38
ATOM	4566	CD1	PHE	A	571	11.035	59.194	78.591	1.00 18.00
ATOM	4567	CD2	PHE	A	571	11.634	57.902	76.633	1.00 19.72
ATOM	4568	CE1	PHE	A	571	10.768	60.317	77.805	1.00 17.86
ATOM	4569	CE2	PHE	A	571	11.358	59.016	75.836	1.00 23.80
ATOM	4570	CZ	PHE	A	571	10.933	60.213	76.422	1.00 22.47
ATOM	4571	N	LYS	A	572	12.839	55.023	81.080	1.00 14.21
ATOM	4572	CA	LYS	A	572	12.530	54.361	82.325	1.00 14.07
ATOM	4573	C	LYS	A	572	13.476	54.788	83.444	1.00 16.22
ATOM	4574	O	LYS	A	572	13.123	54.998	84.620	1.00 16.74
ATOM	4575	CB	LYS	A	572	12.533	52.850	82.147	1.00 15.58
ATOM	4576	CG	LYS	A	572	11.179	52.157	82.243	1.00 32.41
ATOM	4577	CD	LYS	A	572	11.197	50.722	81.697	1.00 46.79
ATOM	4578	CE	LYS	A	572	11.249	50.620	80.160	1.00 56.38
ATOM	4579	NZ	LYS	A	572	11.823	49.373	79.593	1.00 42.31
ATOM	4580	N	ASP	A	573	14.735	54.914	83.089	1.00 14.00
ATOM	4581	CA	ASP	A	573	15.671	55.286	84.148	1.00 15.33
ATOM	4582	C	ASP	A	573	15.394	56.675	84.662	1.00 15.63
ATOM	4583	O	ASP	A	573	15.531	56.959	85.850	1.00 15.64
ATOM	4584	CB	ASP	A	573	17.137	55.288	83.627	1.00 14.94
ATOM	4585	CG	ASP	A	573	17.688	53.889	83.452	1.00 22.26
ATOM	4586	OD1	ASP	A	573	17.054	52.891	83.773	1.00 18.66
ATOM	4587	OD2	ASP	A	573	18.923	53.848	82.983	1.00 18.27
ATOM	4588	N	LEU	A	574	15.090	57.554	83.708	1.00 12.68
ATOM	4589	CA	LEU	A	574	14.851	58.926	84.092	1.00 11.33
ATOM	4590	C	LEU	A	574	13.611	59.053	84.970	1.00 22.78
ATOM	4591	O	LEU	A	574	13.513	59.923	85.837	1.00 18.71
ATOM	4592	CB	LEU	A	574	14.682	59.802	82.863	1.00 10.39
ATOM	4593	CG	LEU	A	574	15.953	60.021	82.061	1.00 16.41
ATOM	4594	CD1	LEU	A	574	15.501	60.352	80.630	1.00 16.48

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ATOM   4595  CD2 LEU A 574      16.785  61.200  82.608  1.00 12.08
ATOM   4596  N   ALA A 575      12.638  58.173  84.726  1.00 17.79
ATOM   4597  CA  ALA A 575      11.437  58.235  85.500  1.00 15.87
ATOM   4598  C   ALA A 575      11.720  57.682  86.856  1.00 17.98
ATOM   4599  O   ALA A 575      11.050  58.033  87.801  1.00 17.45
ATOM   4600  CB  ALA A 575      10.325  57.449  84.820  1.00 17.20
ATOM   4601  N   ALA A 576      12.703  56.801  86.972  1.00 14.91
ATOM   4602  CA  ALA A 576      13.024  56.222  88.272  1.00 12.59
ATOM   4603  C   ALA A 576      13.930  57.135  89.097  1.00 19.97
ATOM   4604  O   ALA A 576      14.140  56.920  90.281  1.00 22.87
ATOM   4605  CB  ALA A 576      13.732  54.881  88.146  1.00 16.01
ATOM   4606  N   PHE A 577      14.474  58.152  88.469  1.00 15.13
ATOM   4607  CA  PHE A 577      15.337  59.105  89.161  1.00 15.19
ATOM   4608  C   PHE A 577      14.412  60.219  89.660  1.00 19.07
ATOM   4609  O   PHE A 577      13.790  60.932  88.868  1.00 16.74
ATOM   4610  CB  PHE A 577      16.447  59.652  88.210  1.00 14.02
ATOM   4611  CG  PHE A 577      17.494  60.595  88.820  1.00 15.39
ATOM   4612  CD1 PHE A 577      17.678  60.707  90.202  1.00 17.32
ATOM   4613  CD2 PHE A 577      18.295  61.380  87.983  1.00 15.42
ATOM   4614  CE1 PHE A 577      18.646  61.570  90.727  1.00 18.05
ATOM   4615  CE2 PHE A 577      19.272  62.236  88.483  1.00 18.23
ATOM   4616  CZ  PHE A 577      19.442  62.330  89.866  1.00 18.02
ATOM   4617  N   ASP A 578      14.285  60.335  90.983  1.00 19.21
ATOM   4618  CA  ASP A 578      13.394  61.327  91.584  1.00 19.27
ATOM   4619  C   ASP A 578      13.568  62.692  90.981  1.00 18.95
ATOM   4620  O   ASP A 578      12.577  63.347  90.660  1.00 18.48
ATOM   4621  CB  ASP A 578      13.457  61.342  93.130  1.00 28.60
ATOM   4622  CG  ASP A 578      14.714  61.992  93.690  1.00 55.79
ATOM   4623  OD1 ASP A 578      15.779  62.135  93.064  1.00 45.74
ATOM   4624  OD2 ASP A 578      14.512  62.401  94.929  1.00 67.85
ATOM   4625  N   LYS A 579      14.839  63.083  90.791  1.00 17.12
ATOM   4626  CA  LYS A 579      15.185  64.352  90.194  1.00 13.88
ATOM   4627  C   LYS A 579      14.693  64.569  88.758  1.00 21.03
ATOM   4628  O   LYS A 579      14.338  65.689  88.386  1.00 20.91
ATOM   4629  CB  LYS A 579      16.669  64.621  90.293  1.00 13.46
ATOM   4630  CG  LYS A 579      17.159  64.570  91.724  1.00 33.01
ATOM   4631  CD  LYS A 579      16.890  65.878  92.442  1.00 55.78
ATOM   4632  CE  LYS A 579      16.292  65.662  93.816  1.00 58.11
ATOM   4633  NZ  LYS A 579      17.121  66.260  94.867  1.00 54.50
ATOM   4634  N   SER A 580      14.646  63.553  87.897  1.00 14.45
ATOM   4635  CA  SER A 580      14.187  63.844  86.540  1.00 13.57
ATOM   4636  C   SER A 580      12.798  63.298  86.228  1.00 20.81
ATOM   4637  O   SER A 580      12.313  63.384  85.103  1.00 19.66
ATOM   4638  CB  SER A 580      15.113  63.091  85.601  1.00 12.97
ATOM   4639  OG  SER A 580      15.350  61.809  86.186  1.00 17.95
ATOM   4640  N   HIS A 581      12.184  62.664  87.196  1.00 16.52
ATOM   4641  CA  HIS A 581      10.897  62.042  86.971  1.00 16.52
ATOM   4642  C   HIS A 581       9.816  62.866  86.281  1.00 21.39
ATOM   4643  O   HIS A 581       9.250  62.522  85.234  1.00 18.75
ATOM   4644  CB  HIS A 581      10.389  61.487  88.289  1.00 15.62
ATOM   4645  CG  HIS A 581       9.034  60.927  88.100  1.00 22.66
ATOM   4646  ND1 HIS A 581       7.914  61.748  88.110  1.00 27.83
ATOM   4647  CD2 HIS A 581       8.623  59.644  87.899  1.00 27.04
ATOM   4648  CE1 HIS A 581       6.843  60.975  87.926  1.00 27.26
ATOM   4649  NE2 HIS A 581       7.242  59.715  87.789  1.00 28.84
ATOM   4650  N   ASP A 582       9.515  63.986  86.884  1.00 17.59
ATOM   4651  CA  ASP A 582       8.491  64.831  86.322  1.00 20.99
ATOM   4652  C   ASP A 582       8.831  65.284  84.927  1.00 24.43
ATOM   4653  O   ASP A 582       8.013  65.343  84.030  1.00 21.69
ATOM   4654  CB  ASP A 582       8.331  66.085  87.197  1.00 25.08
ATOM   4655  CG  ASP A 582       7.626  65.730  88.466  1.00 30.98
ATOM   4656  OD1 ASP A 582       7.129  64.638  88.645  1.00 36.19
ATOM   4657  OD2 ASP A 582       7.659  66.680  89.359  1.00 38.67
ATOM   4658  N   GLN A 583      10.075  65.649  84.762  1.00 20.38
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ATOM   4659  CA  GLN A 583      10.451  66.076  83.465  1.00 19.54
ATOM   4660  C   GLN A 583      10.423  64.938  82.431  1.00 23.45
ATOM   4661  O   GLN A 583      10.182  65.148  81.229  1.00 23.51
ATOM   4662  CB  GLN A 583      11.857  66.642  83.573  1.00 19.50
ATOM   4663  CG  GLN A 583      12.188  67.300  82.240  1.00 21.61
ATOM   4664  CD  GLN A 583      13.503  68.019  82.370  1.00 44.67
ATOM   4665  OE1 GLN A 583      14.236  67.818  83.357  1.00 39.11
ATOM   4666  NE2 GLN A 583      13.778  68.840  81.373  1.00 40.61
ATOM   4667  N   ALA A 584      10.706  63.718  82.866  1.00 18.70
ATOM   4668  CA  ALA A 584      10.700  62.595  81.927  1.00 15.00
ATOM   4669  C   ALA A 584       9.307  62.411  81.375  1.00 19.16
ATOM   4670  O   ALA A 584       9.101  62.211  80.176  1.00 19.25
ATOM   4671  CB  ALA A 584      11.043  61.288  82.642  1.00 13.44
ATOM   4672  N   VAL A 585       8.356  62.452  82.316  1.00 15.46
ATOM   4673  CA  VAL A 585       6.941  62.258  81.999  1.00 18.57
ATOM   4674  C   VAL A 585       6.418  63.339  81.064  1.00 25.46
ATOM   4675  O   VAL A 585       5.743  63.106  80.055  1.00 23.63
ATOM   4676  CB  VAL A 585       6.090  62.120  83.274  1.00 23.07
ATOM   4677  CG1 VAL A 585       4.610  62.298  82.946  1.00 23.53
ATOM   4678  CG2 VAL A 585       6.340  60.775  83.966  1.00 21.15
ATOM   4679  N   ARG A 586       6.792  64.564  81.405  1.00 23.81
ATOM   4680  CA  ARG A 586       6.395  65.688  80.615  1.00 22.41
ATOM   4681  C   ARG A 586       6.974  65.628  79.223  1.00 22.13
ATOM   4682  O   ARG A 586       6.283  65.909  78.254  1.00 20.69
ATOM   4683  CB  ARG A 586       6.695  67.000  81.329  1.00 21.27
ATOM   4684  CG  ARG A 586       6.573  68.251  80.461  1.00 39.32
ATOM   4685  CD  ARG A 586       7.134  69.519  81.129  1.00 45.58
ATOM   4686  NE  ARG A 586       7.498  69.270  82.525  1.00 68.78
ATOM   4687  CZ  ARG A 586       8.712  69.427  83.074  1.00 82.97
ATOM   4688  NH1 ARG A 586       9.767  69.873  82.357  1.00 50.55
ATOM   4689  NH2 ARG A 586       8.842  69.129  84.383  1.00 31.22
ATOM   4690  N   THR A 587       8.231  65.247  79.095  1.00 19.40
ATOM   4691  CA  THR A 587       8.856  65.157  77.781  1.00 18.84
ATOM   4692  C   THR A 587       8.150  64.170  76.882  1.00 20.71
ATOM   4693  O   THR A 587       7.885  64.391  75.702  1.00 23.03
ATOM   4694  CB  THR A 587      10.313  64.746  77.975  1.00 23.70
ATOM   4695  OG1 THR A 587      10.887  65.693  78.846  1.00 21.83
ATOM   4696  CG2 THR A 587      11.048  64.672  76.654  1.00 21.38
ATOM   4697  N   TYR A 588       7.822  63.043  77.464  1.00 21.74
ATOM   4698  CA  TYR A 588       7.137  62.033  76.693  1.00 19.43
ATOM   4699  C   TYR A 588       5.808  62.573  76.151  1.00 24.31
ATOM   4700  O   TYR A 588       5.450  62.483  74.963  1.00 26.68
ATOM   4701  CB  TYR A 588       6.846  60.854  77.638  1.00 18.46
ATOM   4702  CG  TYR A 588       5.842  59.904  77.014  1.00 21.76
ATOM   4703  CD1 TYR A 588       6.169  59.136  75.891  1.00 22.44
ATOM   4704  CD2 TYR A 588       4.549  59.808  77.540  1.00 22.19
ATOM   4705  CE1 TYR A 588       5.217  58.274  75.335  1.00 26.93
ATOM   4706  CE2 TYR A 588       3.584  58.961  76.999  1.00 19.19
ATOM   4707  CZ  TYR A 588       3.936  58.191  75.890  1.00 25.45
ATOM   4708  OH  TYR A 588       3.008  57.335  75.359  1.00 24.42
ATOM   4709  N   GLN A 589       5.039  63.110  77.088  1.00 23.42
ATOM   4710  CA  GLN A 589       3.727  63.642  76.762  1.00 22.93
ATOM   4711  C   GLN A 589       3.806  64.594  75.596  1.00 20.18
ATOM   4712  O   GLN A 589       2.957  64.626  74.707  1.00 23.55
ATOM   4713  CB  GLN A 589       3.139  64.384  77.981  1.00 25.07
ATOM   4714  CG  GLN A 589       2.683  63.449  79.119  1.00 21.54
ATOM   4715  CD  GLN A 589       1.470  62.587  78.765  1.00 41.81
ATOM   4716  OE1 GLN A 589       1.197  62.264  77.606  1.00 37.70
ATOM   4717  NE2 GLN A 589       0.721  62.186  79.779  1.00 58.94
ATOM   4718  N   GLU A 590       4.844  65.400  75.649  1.00 17.93
ATOM   4719  CA  GLU A 590       5.097  66.416  74.644  1.00 19.01
ATOM   4720  C   GLU A 590       5.566  65.826  73.363  1.00 26.93
ATOM   4721  O   GLU A 590       5.393  66.453  72.312  1.00 23.86
ATOM   4722  CB  GLU A 590       6.176  67.452  75.021  1.00 20.73
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ATOM   4723  CG  GLU A 590       5.706  68.358  76.180  1.00 36.88
ATOM   4724  CD  GLU A 590       6.810  69.187  76.769  1.00 62.73
ATOM   4725  OE1 GLU A 590       7.988  69.112  76.403  1.00 55.19
ATOM   4726  OE2 GLU A 590       6.341  69.975  77.718  1.00 40.10
ATOM   4727  N   HIS A 591       6.203  64.666  73.476  1.00 23.79
ATOM   4728  CA  HIS A 591       6.700  64.086  72.250  1.00 23.24
ATOM   4729  C   HIS A 591       5.818  63.013  71.689  1.00 20.50
ATOM   4730  O   HIS A 591       5.965  62.619  70.541  1.00 24.92
ATOM   4731  CB  HIS A 591       8.076  63.446  72.481  1.00 22.84
ATOM   4732  CG  HIS A 591       9.175  64.446  72.384  1.00 25.11
ATOM   4733  ND1 HIS A 591       9.381  65.385  73.378  1.00 28.84
ATOM   4734  CD2 HIS A 591      10.092  64.667  71.403  1.00 26.79
ATOM   4735  CE1 HIS A 591      10.408  66.147  72.984  1.00 27.18
ATOM   4736  NE2 HIS A 591      10.853  65.745  71.796  1.00 26.51
ATOM   4737  N   LYS A 592       4.939  62.487  72.503  1.00 19.36
ATOM   4738  CA  LYS A 592       4.202  61.366  71.988  1.00 19.14
ATOM   4739  C   LYS A 592       3.553  61.382  70.613  1.00 28.03
ATOM   4740  O   LYS A 592       3.592  60.409  69.856  1.00 23.29
ATOM   4741  CB  LYS A 592       3.431  60.669  73.048  1.00 18.80
ATOM   4742  CG  LYS A 592       2.321  61.545  73.519  1.00 26.37
ATOM   4743  CD  LYS A 592       1.414  60.713  74.400  1.00 33.29
ATOM   4744  CE  LYS A 592       0.018  61.301  74.523  1.00 45.98
ATOM   4745  NZ  LYS A 592      -0.530  61.163  75.874  1.00 25.02
ATOM   4746  N   ALA A 593       2.905  62.494  70.300  1.00 29.63
ATOM   4747  CA  ALA A 593       2.225  62.650  69.016  1.00 26.27
ATOM   4748  C   ALA A 593       3.157  62.524  67.808  1.00 26.27
ATOM   4749  O   ALA A 593       2.741  62.121  66.732  1.00 28.39
ATOM   4750  CB  ALA A 593       1.558  64.018  68.998  1.00 24.94
ATOM   4751  N   SER A 594       4.420  62.891  67.988  1.00 21.56
ATOM   4752  CA  SER A 594       5.404  62.867  66.930  1.00 22.18
ATOM   4753  C   SER A 594       6.238  61.590  66.949  1.00 22.38
ATOM   4754  O   SER A 594       7.160  61.444  66.137  1.00 20.87
ATOM   4755  CB  SER A 594       6.352  64.049  67.098  1.00 29.27
ATOM   4756  OG  SER A 594       7.286  63.814  68.156  1.00 45.26
ATOM   4757  N   MET A 595       5.922  60.678  67.858  1.00 17.72
ATOM   4758  CA  MET A 595       6.732  59.453  67.945  1.00 17.90
ATOM   4759  C   MET A 595       6.240  58.295  67.114  1.00 21.97
ATOM   4760  O   MET A 595       5.105  58.257  66.683  1.00 26.36
ATOM   4761  CB  MET A 595       6.717  58.931  69.396  1.00 17.35
ATOM   4762  CG  MET A 595       7.616  59.720  70.321  1.00 18.64
ATOM   4763  SD  MET A 595       7.451  59.068  71.999  1.00 25.54
ATOM   4764  CE  MET A 595       7.775  60.523  72.990  1.00 32.21
ATOM   4765  N   HIS A 596       7.066  57.284  66.954  1.00 15.02
ATOM   4766  CA  HIS A 596       6.593  56.105  66.258  1.00 16.62
ATOM   4767  C   HIS A 596       5.458  55.524  67.111  1.00 19.77
ATOM   4768  O   HIS A 596       5.474  55.605  68.324  1.00 19.53
ATOM   4769  CB  HIS A 596       7.756  55.103  66.052  1.00 17.44
ATOM   4770  CG  HIS A 596       7.280  53.844  65.414  1.00 20.36
ATOM   4771  ND1 HIS A 596       7.474  53.623  64.059  1.00 22.76
ATOM   4772  CD2 HIS A 596       6.582  52.790  65.937  1.00 19.37
ATOM   4773  CE1 HIS A 596       6.928  52.443  63.770  1.00 21.23
ATOM   4774  NE2 HIS A 596       6.375  51.935  64.879  1.00 22.61
ATOM   4775  N   PRO A 597       4.425  54.948  66.507  1.00 19.72
ATOM   4776  CA  PRO A 597       3.284  54.409  67.233  1.00 17.32
ATOM   4777  C   PRO A 597       3.515  53.268  68.221  1.00 22.24
ATOM   4778  O   PRO A 597       2.887  53.165  69.277  1.00 20.86
ATOM   4779  CB  PRO A 597       2.228  54.031  66.181  1.00 15.13
ATOM   4780  CG  PRO A 597       2.989  53.918  64.893  1.00 20.16
ATOM   4781  CD  PRO A 597       4.195  54.843  65.045  1.00 19.53
ATOM   4782  N   VAL A 598       4.381  52.340  67.895  1.00 17.95
ATOM   4783  CA  VAL A 598       4.575  51.277  68.868  1.00 17.06
ATOM   4784  C   VAL A 598       5.463  51.830  69.993  1.00 16.39
ATOM   4785  O   VAL A 598       5.188  51.629  71.176  1.00 18.72
ATOM   4786  CB  VAL A 598       5.175  50.039  68.180  1.00 20.87
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ATOM	4787	CG1	VAL	A	598	5.739	48.974	69.142	1.00	15.98
ATOM	4788	CG2	VAL	A	598	4.169	49.498	67.132	1.00	17.75
ATOM	4789	N	THR	A	599	6.521	52.548	69.605	1.00	17.91
ATOM	4790	CA	THR	A	599	7.370	53.125	70.636	1.00	20.42
ATOM	4791	C	THR	A	599	6.544	53.965	71.615	1.00	25.40
ATOM	4792	O	THR	A	599	6.683	53.931	72.848	1.00	18.93
ATOM	4793	CB	THR	A	599	8.436	53.999	69.997	1.00	17.80
ATOM	4794	OG1	THR	A	599	9.082	53.238	68.989	1.00	19.92
ATOM	4795	CG2	THR	A	599	9.399	54.486	71.090	1.00	17.59
ATOM	4796	N	ALA	A	600	5.657	54.749	71.018	1.00	18.73
ATOM	4797	CA	ALA	A	600	4.798	55.590	71.796	1.00	17.65
ATOM	4798	C	ALA	A	600	3.971	54.764	72.739	1.00	20.00
ATOM	4799	O	ALA	A	600	3.867	55.053	73.932	1.00	21.50
ATOM	4800	CB	ALA	A	600	3.869	56.344	70.879	1.00	19.26
ATOM	4801	N	MET	A	601	3.344	53.731	72.218	1.00	17.31
ATOM	4802	CA	MET	A	601	2.539	52.928	73.126	1.00	15.28
ATOM	4803	C	MET	A	601	3.409	52.308	74.224	1.00	17.52
ATOM	4804	O	MET	A	601	3.018	52.245	75.371	1.00	15.39
ATOM	4805	CB	MET	A	601	1.761	51.815	72.369	1.00	16.44
ATOM	4806	CG	MET	A	601	1.008	50.813	73.242	1.00	20.22
ATOM	4807	SD	MET	A	601	1.962	49.492	74.103	1.00	24.22
ATOM	4808	CE	MET	A	601	2.327	48.392	72.695	1.00	18.59
ATOM	4809	N	LEU	A	602	4.580	51.778	73.889	1.00	16.21
ATOM	4810	CA	LEU	A	602	5.389	51.117	74.924	1.00	16.19
ATOM	4811	C	LEU	A	602	5.940	52.055	76.027	1.00	18.15
ATOM	4812	O	LEU	A	602	5.962	51.722	77.214	1.00	18.36
ATOM	4813	CB	LEU	A	602	6.507	50.267	74.269	1.00	14.21
ATOM	4814	CG	LEU	A	602	5.987	49.058	73.508	1.00	18.02
ATOM	4815	CD1	LEU	A	602	7.100	48.467	72.642	1.00	17.78
ATOM	4816	CD2	LEU	A	602	5.502	48.030	74.515	1.00	21.84
ATOM	4817	N	VAL	A	603	6.426	53.224	75.617	1.00	15.71
ATOM	4818	CA	VAL	A	603	6.962	54.208	76.549	1.00	15.67
ATOM	4819	C	VAL	A	603	5.877	54.648	77.537	1.00	17.35
ATOM	4820	O	VAL	A	603	6.093	54.733	78.741	1.00	18.72
ATOM	4821	CB	VAL	A	603	7.665	55.345	75.807	1.00	19.16
ATOM	4822	CG1	VAL	A	603	8.035	56.477	76.764	1.00	15.61
ATOM	4823	CG2	VAL	A	603	8.943	54.837	75.115	1.00	17.56
ATOM	4824	N	GLY	A	604	4.661	54.851	77.027	1.00	14.92
ATOM	4825	CA	GLY	A	604	3.535	55.262	77.879	1.00	14.02
ATOM	4826	C	GLY	A	604	3.239	54.206	78.898	1.00	17.85
ATOM	4827	O	GLY	A	604	2.984	54.443	80.075	1.00	21.21
ATOM	4828	N	LYS	A	605	3.306	52.987	78.426	1.00	16.57
ATOM	4829	CA	LYS	A	605	3.127	51.873	79.330	1.00	18.08
ATOM	4830	C	LYS	A	605	4.251	51.892	80.348	1.00	22.76
ATOM	4831	O	LYS	A	605	4.034	51.859	81.558	1.00	26.27
ATOM	4832	CB	LYS	A	605	3.190	50.541	78.607	1.00	22.73
ATOM	4833	CG	LYS	A	605	1.870	49.811	78.714	1.00	40.15
ATOM	4834	CD	LYS	A	605	1.919	48.377	78.211	1.00	57.40
ATOM	4835	CE	LYS	A	605	1.068	47.461	79.074	1.00	75.31
ATOM	4836	NZ	LYS	A	605	1.808	46.387	79.758	1.00	74.64
ATOM	4837	N	ASP	A	606	5.470	51.943	79.836	1.00	17.17
ATOM	4838	CA	ASP	A	606	6.607	51.972	80.718	1.00	16.61
ATOM	4839	C	ASP	A	606	6.442	53.059	81.738	1.00	19.46
ATOM	4840	O	ASP	A	606	6.790	52.848	82.884	1.00	19.57
ATOM	4841	CB	ASP	A	606	7.945	52.255	79.990	1.00	16.98
ATOM	4842	CG	ASP	A	606	8.365	51.063	79.187	1.00	21.21
ATOM	4843	OD1	ASP	A	606	7.944	49.933	79.376	1.00	20.21
ATOM	4844	OD2	ASP	A	606	9.189	51.355	78.249	1.00	18.07
ATOM	4845	N	LEU	A	607	5.974	54.207	81.306	1.00	16.61
ATOM	4846	CA	LEU	A	607	5.863	55.352	82.211	1.00	20.64
ATOM	4847	C	LEU	A	607	4.586	55.384	83.026	1.00	27.05
ATOM	4848	O	LEU	A	607	4.361	56.274	83.862	1.00	23.83
ATOM	4849	CB	LEU	A	607	5.991	56.641	81.388	1.00	23.11
ATOM	4850	CG	LEU	A	607	7.377	57.301	81.464	1.00	28.84

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ATOM   4851  CD1 LEU A 607       8.508  56.323  81.711  1.00 29.33
ATOM   4852  CD2 LEU A 607       7.650  58.116  80.214  1.00 19.22
ATOM   4853  N   LYS A 608       3.739  54.409  82.739  1.00 21.45
ATOM   4854  CA  LYS A 608       2.504  54.308  83.446  1.00 22.51
ATOM   4855  C   LYS A 608       1.657  55.529  83.202  1.00 31.79
ATOM   4856  O   LYS A 608       0.933  56.008  84.076  1.00 34.10
ATOM   4857  CB  LYS A 608       2.810  54.200  84.918  1.00 24.85
ATOM   4858  CG  LYS A 608       3.190  52.782  85.308  1.00 45.51
ATOM   4859  CD  LYS A 608       3.932  52.718  86.635  1.00 76.45
ATOM   4860  CE  LYS A 608       4.251  51.291  87.078  1.00100.00
ATOM   4861  NZ  LYS A 608       4.137  51.050  88.533  1.00100.00
ATOM   4862  N   VAL A 609       1.781  56.084  82.021  1.00 29.53
ATOM   4863  CA  VAL A 609       0.962  57.231  81.738  1.00 32.22
ATOM   4864  C   VAL A 609      -0.257  56.755  80.958  1.00 47.38
ATOM   4865  O   VAL A 609      -0.150  55.800  80.186  1.00 49.22
ATOM   4866  CB  VAL A 609       1.679  58.328  80.966  1.00 38.27
ATOM   4867  CG1 VAL A 609       3.188  58.240  81.067  1.00 38.12
ATOM   4868  CG2 VAL A 609       1.227  58.313  79.515  1.00 39.79
ATOM   4869  N   ASP A 610      -1.402  57.415  81.173  1.00 49.29
ATOM   4870  CA  ASP A 610      -2.675  57.124  80.510  1.00 98.66
ATOM   4871  C   ASP A 610      -3.541  56.207  81.365  1.00100.00
ATOM   4872  O   ASP A 610      -3.950  56.568  82.470  1.00 78.31
ATOM   4873  CB  ASP A 610      -2.550  56.631  79.044  1.00100.00
ATOM   4874  CG  ASP A 610      -1.930  57.631  78.091  1.00100.00
ATOM   4875  OD1 ASP A 610      -2.251  58.807  78.062  1.00 99.48
ATOM   4876  OD2 ASP A 610      -1.019  57.111  77.288  1.00100.00
TER    4877       ASP A 610
ATOM   4878 ZN2+ ZN  Z   1      16.972  39.340  64.102  1.00 16.33
ATOM   4879 YB3+ YB  Y   1      42.669  51.366  99.201  1.00 18.06
ATOM   4880 YB3+ YB  Y   2     -13.732  57.497  52.155  0.50 46.53
ATOM   4881 YB3+ YB  Y   3     -10.443  58.443  52.469  0.50 30.25
ATOM   4882  N2  BES B   1      13.712  41.186  63.145  1.00 25.72
ATOM   4883  C1  BES B   1      14.450  41.733  64.255  1.00 24.13
ATOM   4884  C6  BES B   1      13.749  42.939  64.880  1.00 23.84
ATOM   4885  C7  BES B   1      12.300  42.727  65.283  1.00 19.51
ATOM   4886  C8  BES B   1      11.297  43.571  64.799  1.00 18.42
ATOM   4887  C12 BES B   1      11.934  41.717  66.170  1.00 19.27
ATOM   4888  C9  BES B   1       9.990  43.454  65.227  1.00 16.90
ATOM   4889  C11 BES B   1      10.614  41.580  66.600  1.00 19.17
ATOM   4890  C10 BES B   1       9.639  42.451  66.135  1.00 18.42
ATOM   4891  C2  BES B   1      15.881  42.065  63.795  1.00 21.80
ATOM   4892  O2  BES B   1      16.369  41.004  62.999  1.00 18.60
ATOM   4893  C3  BES B   1      16.741  42.156  65.063  1.00 23.33
ATOM   4894  O3  BES B   1      16.932  41.185  65.803  1.00 25.68
ATOM   4895  N1  BES B   1      17.280  43.376  65.250  1.00 21.90
ATOM   4896  C4  BES B   1      18.157  43.613  66.390  1.00 24.18
ATOM   4897  C13 BES B   1      19.568  43.595  65.855  1.00 22.49
ATOM   4898  C14 BES B   1      20.669  42.812  66.576  1.00 24.23
ATOM   4899  C15 BES B   1      20.210  41.770  67.577  1.00 23.32
ATOM   4900  C16 BES B   1      21.692  42.287  65.590  1.00 22.52
ATOM   4901  C5  BES B   1      17.840  45.000  67.053  1.00 25.70
ATOM   4902  O1  BES B   1      17.160  45.848  66.348  1.00 22.63
ATOM   4903  O4  BES B   1      18.206  45.226  68.192  1.00 26.52
ATOM   4904  CG  IMD I   1      26.142  42.633  80.576  1.00 14.44
ATOM   4905  ND1 IMD I   1      25.962  42.811  79.218  1.00 15.15
ATOM   4906  CD2 IMD I   1      27.444  42.291  80.744  1.00 13.81
ATOM   4907  CE1 IMD I   1      27.096  42.555  78.588  1.00  9.17
ATOM   4908  NE2 IMD I   1      28.014  42.249  79.494  1.00 21.14
ATOM   4909  CB  ACE C   1      13.753  12.531  68.686  1.00 39.29
ATOM   4910  CG  ACE C   1      13.041  13.755  69.176  1.00 52.31
ATOM   4911  OD1 ACE C   1      13.310  14.951  68.885  1.00 21.34
ATOM   4912  OD2 ACE C   1      12.075  13.324  69.958  1.00 27.10
ATOM   4913  O   HOH W   1      23.792  34.258  75.188  1.00 13.41
ATOM   4914  O   HOH W   2      41.402  41.645  77.736  1.00 18.41
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ATOM   4915  O   HOH W   3      21.452  48.008  79.289  1.00 14.29
ATOM   4916  O   HOH W   4       7.395  22.508  68.980  1.00 15.42
ATOM   4917  O   HOH W   5       8.875  45.610  71.521  1.00 15.01
ATOM   4918  O   HOH W   6      18.318  15.775  81.560  1.00 42.99
ATOM   4919  O   HOH W   7      30.607  45.406  73.230  1.00 16.49
ATOM   4920  O   HOH W   8       2.151  35.326  56.132  1.00 20.69
ATOM   4921  O   HOH W   9      26.371  45.237  72.729  1.00 32.21
ATOM   4922  O   HOH W  10      10.117  47.411  58.465  1.00 19.66
ATOM   4923  O   HOH W  11      24.576  45.901  81.764  1.00 15.98
ATOM   4924  O   HOH W  12      21.400  39.522  70.350  1.00 17.59
ATOM   4925  O   HOH W  13      32.755  39.688  76.763  1.00 14.73
ATOM   4926  O   HOH W  14      15.723  43.292  73.593  1.00 28.15
ATOM   4927  O   HOH W  15      33.012  53.990  68.029  1.00 20.61
ATOM   4928  O   HOH W  16      21.672  48.368  86.318  1.00 18.35
ATOM   4929  O   HOH W  17      11.843  66.293  86.775  1.00 20.28
ATOM   4930  O   HOH W  18      -7.370  39.258  72.858  1.00100.00
ATOM   4931  O   HOH W  19      10.951  58.853  90.712  1.00 31.18
ATOM   4932  O   HOH W  20       7.991  67.991  69.688  1.00 51.29
ATOM   4933  O   HOH W  21      27.534  25.933  83.686  1.00 30.42
ATOM   4934  O   HOH W  22      14.754  47.886  81.192  1.00 91.59
ATOM   4935  O   HOH W  23      35.638  66.681  74.616  1.00 18.43
ATOM   4936  O   HOH W  24      14.917  46.651  71.292  1.00 29.09
ATOM   4937  O   HOH W  25      24.339  72.545  82.858  1.00 27.38
ATOM   4938  O   HOH W  26       3.954  59.653  64.218  1.00 29.75
ATOM   4939  O   HOH W  27       0.174  30.326  72.099  1.00 20.53
ATOM   4940  O   HOH W  28      17.250  55.520  87.251  1.00 15.14
ATOM   4941  O   HOH W  29       2.640  38.007  61.525  1.00 15.01
ATOM   4942  O   HOH W  30      10.861  36.115  89.266  1.00 26.76
ATOM   4943  O   HOH W  31      30.988  44.243  70.800  1.00 37.98
ATOM   4944  O   HOH W  32       9.095  44.675  75.314  1.00 24.97
ATOM   4945  O   HOH W  33      29.917  47.569  70.312  1.00 33.43
ATOM   4946  O   HOH W  34      23.537  45.186  73.070  1.00 21.89
ATOM   4947  O   HOH W  35      13.919  30.086  87.520  1.00 27.60
ATOM   4948  O   HOH W  36      24.004  28.230  84.950  1.00 54.91
ATOM   4949  O   HOH W  37      44.740  56.907  93.797  1.00 39.70
ATOM   4950  O   HOH W  38      36.453  36.919  75.700  1.00 12.06
ATOM   4951  O   HOH W  39      27.587  65.302  75.920  1.00 21.02
ATOM   4952  O   HOH W  40      23.077  39.811  87.155  1.00 38.48
ATOM   4953  O   HOH W  41       3.661  37.055  59.039  1.00 17.86
ATOM   4954  O   HOH W  42      21.794  20.673  79.219  1.00 20.60
ATOM   4955  O   HOH W  43       6.324  36.055  87.167  1.00 30.35
ATOM   4956  O   HOH W  44      24.649  34.194  44.975  1.00 52.51
ATOM   4957  O   HOH W  45      20.611  44.717  78.685  1.00 27.41
ATOM   4958  O   HOH W  46      19.969  50.884  89.461  1.00 29.62
ATOM   4959  O   HOH W  47      30.940  66.808  78.811  1.00 15.76
ATOM   4960  O   HOH W  48      26.539  55.260  66.886  1.00 19.97
ATOM   4961  O   HOH W  49       7.314  45.436  77.867  1.00 35.07
ATOM   4962  O   HOH W  50      10.579  54.800  67.603  1.00 15.62
ATOM   4963  O   HOH W  51      28.138  31.371  66.611  1.00 15.08
ATOM   4964  O   HOH W  52      26.292  33.348  75.129  1.00 15.49
ATOM   4965  O   HOH W  53      15.204  48.508  69.331  1.00 16.03
ATOM   4966  O   HOH W  54       9.451  57.282  68.158  1.00 20.39
ATOM   4967  O   HOH W  55      34.923  67.738  77.001  1.00 15.06
ATOM   4968  O   HOH W  56      10.193  53.763  78.443  1.00 19.23
ATOM   4969  O   HOH W  57      35.246  32.562  64.227  1.00 27.89
ATOM   4970  O   HOH W  58       7.230  48.517  65.509  1.00 17.57
ATOM   4971  O   HOH W  59      15.707  29.269  62.146  1.00 16.76
ATOM   4972  O   HOH W  60      22.703  46.209  83.610  1.00 14.72
ATOM   4973  O   HOH W  61      -5.573  31.742  67.048  1.00 67.53
ATOM   4974  O   HOH W  62      23.958  46.448  79.118  1.00 14.95
ATOM   4975  O   HOH W  63      -4.387  51.289  59.224  1.00 29.13
ATOM   4976  O   HOH W  64       1.494  43.916  68.255  1.00 21.32
ATOM   4977  O   HOH W  65      15.236  37.185  89.202  1.00 24.71
ATOM   4978  O   HOH W  66       8.901  44.256  58.842  1.00 22.41
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ATOM   4979  O   HOH W  67       8.741  44.059  69.410  1.00 19.23
ATOM   4980  O   HOH W  68      10.536  31.361  71.130  1.00 17.26
ATOM   4981  O   HOH W  69      14.270  66.977  85.494  1.00 24.71
ATOM   4982  O   HOH W  70      19.324  33.013  51.120  1.00 31.37
ATOM   4983  O   HOH W  71      22.888  42.589  71.900  1.00 32.53
ATOM   4984  O   HOH W  72      18.199  19.792  50.850  1.00 95.99
ATOM   4985  O   HOH W  73      -2.766  36.708  53.654  1.00 25.61
ATOM   4986  O   HOH W  74      40.154  44.352  89.098  1.00 18.04
ATOM   4987  O   HOH W  75      43.798  45.414  76.216  1.00 42.09
ATOM   4988  O   HOH W  76       2.095  33.636  67.241  1.00 16.77
ATOM   4989  O   HOH W  77      17.697  47.834  68.674  1.00 15.55
ATOM   4990  O   HOH W  78       0.487  49.526  68.994  1.00 40.71
ATOM   4991  O   HOH W  79      24.958  57.027  93.315  1.00 15.83
ATOM   4992  O   HOH W  80      16.157  27.572  83.036  1.00 20.90
ATOM   4993  O   HOH W  81       5.222  49.330  63.415  1.00 17.36
ATOM   4994  O   HOH W  82      16.211  37.941  52.836  1.00 19.88
ATOM   4995  O   HOH W  83      32.789  43.179  86.654  1.00 20.34
ATOM   4996  O   HOH W  84       9.298  48.075  81.153  1.00 54.83
ATOM   4997  O   HOH W  85      29.454  36.152  82.527  1.00 29.31
ATOM   4998  O   HOH W  86      41.926  50.859  91.024  1.00 26.91
ATOM   4999  O   HOH W  87      42.353  47.486  84.905  1.00 21.77
ATOM   5000  O   HOH W  88       7.099  45.738  66.261  1.00 16.80
ATOM   5001  O   HOH W  89      -7.189  40.950  62.864  1.00 18.87
ATOM   5002  O   HOH W  90      -0.532  35.957  55.006  1.00 30.96
ATOM   5003  O   HOH W  91       2.498  58.239  62.223  1.00 33.64
ATOM   5004  O   HOH W  92       8.030  54.347  85.172  1.00 36.67
ATOM   5005  O   HOH W  93      -9.086  47.257  64.010  1.00 25.14
ATOM   5006  O   HOH W  94       7.634  23.157  71.565  1.00 26.48
ATOM   5007  O   HOH W  95      36.802  57.687  75.942  1.00 33.51
ATOM   5008  O   HOH W  96      31.266  28.847  81.561  1.00 33.78
ATOM   5009  O   HOH W  97      42.718  53.265  90.455  1.00 18.15
ATOM   5010  O   HOH W  98      25.175  49.362  94.064  1.00 38.55
ATOM   5011  O   HOH W  99      -1.458  36.897  71.377  1.00 21.47
ATOM   5012  O   HOH W 100      36.955  22.462  67.101  1.00 62.30
ATOM   5013  O   HOH W 101      17.777  47.785  75.841  1.00 20.17
ATOM   5014  O   HOH W 102      17.194  41.841  54.112  1.00 16.39
ATOM   5015  O   HOH W 103      -1.972  55.370  57.254  1.00 25.11
ATOM   5016  O   HOH W 104      27.602  40.677  72.586  1.00 21.30
ATOM   5017  O   HOH W 105      37.435  51.467  61.104  1.00 65.38
ATOM   5018  O   HOH W 106       1.256  32.447  69.628  1.00 23.44
ATOM   5019  O   HOH W 107       9.241  16.192  63.327  1.00 48.00
ATOM   5020  O   HOH W 108       0.854  36.054  64.035  1.00 18.60
ATOM   5021  O   HOH W 109      18.727  44.131  84.651  1.00 24.89
ATOM   5022  O   HOH W 110      26.098  18.961  78.803  1.00 24.48
ATOM   5023  O   HOH W 111      19.158  42.699  78.273  1.00 28.07
ATOM   5024  O   HOH W 112      38.525  39.961  90.164  1.00 49.63
ATOM   5025  O   HOH W 113      18.603  45.487  82.264  1.00 21.64
ATOM   5026  O   HOH W 114      -9.935  47.106  60.568  1.00 27.24
ATOM   5027  O   HOH W 115      12.837  36.710  59.433  1.00 15.13
ATOM   5028  O   HOH W 116      33.438  65.032  85.997  1.00 32.21
ATOM   5029  O   HOH W 117      38.122  36.535  73.494  1.00 12.50
ATOM   5030  O   HOH W 118      39.258  66.537  78.047  1.00 18.65
ATOM   5031  O   HOH W 119       6.554  34.671  88.987  1.00 15.86
ATOM   5032  O   HOH W 120      13.095  46.874  73.346  1.00 30.35
ATOM   5033  O   HOH W 121      32.660  36.335  82.732  1.00 35.47
ATOM   5034  O   HOH W 122       9.605  28.610  88.505  1.00 19.15
ATOM   5035  O   HOH W 123      27.330  46.500  69.982  1.00 28.22
ATOM   5036  O   HOH W 124      21.495  44.397  85.333  1.00 27.70
ATOM   5037  O   HOH W 125      25.964  67.884  90.313  1.00 24.59
ATOM   5038  O   HOH W 126      39.654  61.279  78.612  1.00 34.08
ATOM   5039  O   HOH W 127      28.830  50.839  62.528  1.00 22.84
ATOM   5040  O   HOH W 128      -2.192  25.904  60.928  1.00 48.99
ATOM   5041  O   HOH W 129      12.941  37.733  62.998  1.00 17.09
ATOM   5042  O   HOH W 130      17.656  39.494  55.302  1.00 23.77
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ATOM   5043  O   HOH W 131       5.616  31.767  78.251  1.00 22.11
ATOM   5044  O   HOH W 132      11.134  59.317  68.286  1.00 24.37
ATOM   5045  O   HOH W 133       7.669  46.689  57.186  1.00 19.15
ATOM   5046  O   HOH W 134      24.475  34.718  86.839  1.00 32.19
ATOM   5047  O   HOH W 135      23.517  44.933  68.463  1.00 20.25
ATOM   5048  O   HOH W 136      26.942  39.752  68.390  1.00 15.96
ATOM   5049  O   HOH W 137       8.029  20.133  84.468  1.00 16.28
ATOM   5050  O   HOH W 138      -0.771  45.529  78.260  1.00 68.55
ATOM   5051  O   HOH W 139      44.023  49.889  77.980  1.00 30.04
ATOM   5052  O   HOH W 140      26.786  62.061  81.604  1.00 16.85
ATOM   5053  O   HOH W 141      13.879  47.676  76.209  1.00 46.91
ATOM   5054  O   HOH W 142      25.840  58.036  65.771  1.00 54.37
ATOM   5055  O   HOH W 143      10.922  53.966  85.792  1.00 18.98
ATOM   5056  O   HOH W 144     -12.182  45.374  45.449  1.00 33.96
ATOM   5057  O   HOH W 145      31.206  39.579  79.369  1.00 15.60
ATOM   5058  O   HOH W 146      15.440  42.222  77.590  1.00 25.43
ATOM   5059  O   HOH W 147       0.824  56.052  62.386  1.00 26.41
ATOM   5060  O   HOH W 148      44.978  53.578  86.262  1.00 22.60
ATOM   5061  O   HOH W 149      17.898  31.967  86.834  1.00 19.51
ATOM   5062  O   HOH W 150      15.892  63.944  61.374  1.00 54.27
ATOM   5063  O   HOH W 151      29.311  44.330  75.316  1.00 39.02
ATOM   5064  O   HOH W 152      11.678  62.566  52.561  1.00 27.61
ATOM   5065  O   HOH W 153      26.748  53.479  95.785  1.00 45.53
ATOM   5066  O   HOH W 154      35.164  39.157  88.454  1.00 33.28
ATOM   5067  O   HOH W 155      13.599  30.411  61.539  1.00 16.55
ATOM   5068  O   HOH W 156       2.955  41.496  60.167  1.00 26.41
ATOM   5069  O   HOH W 157      21.013  47.058  81.902  1.00 24.07
ATOM   5070  O   HOH W 158       7.082  15.804  68.963  1.00 13.64
ATOM   5071  O   HOH W 159      43.659  51.565  97.228  1.00 13.91
ATOM   5072  O   HOH W 160      25.728  46.521  67.857  1.00 15.18
ATOM   5073  O   HOH W 161      16.336  27.429  80.519  1.00 13.58
ATOM   5074  O   HOH W 162      13.506  27.963  78.488  1.00 11.63
ATOM   5075  O   HOH W 163      -1.826  28.836  60.633  1.00 18.21
ATOM   5076  O   HOH W 164       2.041  28.523  68.718  1.00 19.80
ATOM   5077  O   HOH W 165      39.832  50.082  92.567  1.00 15.76
ATOM   5078  O   HOH W 166      20.417  35.797  44.686  1.00 23.98
ATOM   5079  O   HOH W 167      36.272  60.259  74.993  1.00 26.08
ATOM   5080  O   HOH W 168       5.426  61.205  63.338  1.00 23.06
ATOM   5081  O   HOH W 169      17.667  67.608  77.116  1.00 28.66
ATOM   5082  O   HOH W 170       5.631  18.160  69.508  1.00 19.48
ATOM   5083  O   HOH W 171      22.328  62.979  93.415  1.00 25.81
ATOM   5084  O   HOH W 172      40.390  48.175  94.855  1.00 47.37
ATOM   5085  O   HOH W 173      17.444  40.095  51.789  1.00 18.19
ATOM   5086  O   HOH W 174      29.587  24.011  76.681  1.00 24.09
ATOM   5087  O   HOH W 175       6.778  26.010  80.637  1.00 26.64
ATOM   5088  O   HOH W 176      43.821  42.250  81.895  1.00 24.88
ATOM   5089  O   HOH W 177      28.198  18.300  60.474  1.00 24.14
ATOM   5090  O   HOH W 178      22.788  46.771  90.209  1.00 24.26
ATOM   5091  O   HOH W 179      29.931  24.564  79.534  1.00 31.74
ATOM   5092  O   HOH W 180      10.739  18.587  70.209  1.00 34.82
ATOM   5093  O   HOH W 181       3.737  42.980  66.727  1.00 18.45
ATOM   5094  O   HOH W 182      10.657  69.135  86.850  1.00 30.21
ATOM   5095  O   HOH W 183      23.612  39.959  68.861  1.00 20.99
ATOM   5096  O   HOH W 184      30.240  50.378  93.511  1.00 31.76
ATOM   5097  O   HOH W 185      24.407  42.363  69.680  1.00 23.63
ATOM   5098  O   HOH W 186       3.121  26.698  57.992  1.00 26.26
ATOM   5099  O   HOH W 187       6.662  51.993  60.872  1.00 21.24
ATOM   5100  O   HOH W 188      10.549  31.727  52.631  1.00 21.12
ATOM   5101  O   HOH W 189       7.213  14.560  66.229  1.00 19.68
ATOM   5102  O   HOH W 190      10.944  37.995  74.849  1.00 26.21
ATOM   5103  O   HOH W 191      29.009  38.268  80.361  1.00 21.40
ATOM   5104  O   HOH W 192       8.720  37.803  87.790  1.00 25.70
ATOM   5105  O   HOH W 193      30.731  47.721  57.132  1.00 25.12
ATOM   5106  O   HOH W 194      21.085  45.693  69.052  1.00 27.11
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ATOM   5107  O   HOH W 195      37.609  50.318  68.349  1.00 33.12
ATOM   5108  O   HOH W 196      -4.270  35.004  72.084  1.00 23.92
ATOM   5109  O   HOH W 197      38.619  67.647  73.848  1.00 28.81
ATOM   5110  O   HOH W 198       0.963  27.263  54.964  1.00 25.61
ATOM   5111  O   HOH W 199      32.881  53.350  97.969  1.00 72.92
ATOM   5112  O   HOH W 200      16.605  54.411  65.120  1.00 21.12
ATOM   5113  O   HOH W 201      19.780  53.463  90.814  1.00 25.04
ATOM   5114  O   HOH W 202      -7.941  56.718  56.011  1.00 40.98
ATOM   5115  O   HOH W 203       8.373  35.496  71.320  1.00 34.46
ATOM   5116  O   HOH W 204      30.102  60.104  96.117  1.00 23.15
ATOM   5117  O   HOH W 205      28.927  39.455  66.453  1.00 21.12
ATOM   5118  O   HOH W 206      39.689  41.335  88.297  1.00 27.24
ATOM   5119  O   HOH W 207      33.916  37.626  52.438  1.00 33.19
ATOM   5120  O   HOH W 208       1.622  50.963  82.588  1.00 50.35
ATOM   5121  O   HOH W 209      16.333  60.146  56.900  1.00 29.60
ATOM   5122  O   HOH W 210      39.242  45.128  91.725  1.00 22.90
ATOM   5123  O   HOH W 211      14.399  30.418  45.430  1.00 34.78
ATOM   5124  O   HOH W 212      29.888  42.111  88.891  1.00 34.76
ATOM   5125  O   HOH W 213      18.346  26.212  50.297  1.00 44.21
ATOM   5126  O   HOH W 214      22.864  63.026  74.711  1.00 29.30
ATOM   5127  O   HOH W 215      20.113  37.220  85.926  1.00 24.06
ATOM   5128  O   HOH W 216      23.298  70.540  87.208  1.00 35.89
ATOM   5129  O   HOH W 217      26.970  41.872  69.933  1.00 28.60
ATOM   5130  O   HOH W 218      -4.296  44.927  43.216  1.00 33.90
ATOM   5131  O   HOH W 219      12.321  60.082  62.828  1.00 28.33
ATOM   5132  O   HOH W 220      13.873  37.878  45.419  1.00 43.55
ATOM   5133  O   HOH W 221      30.748  40.180  83.791  1.00 37.04
ATOM   5134  O   HOH W 222      15.784  58.732  93.087  1.00 23.80
ATOM   5135  O   HOH W 223      35.311  18.767  63.462  1.00 49.24
ATOM   5136  O   HOH W 224      -0.325  33.536  77.400  1.00 28.59
ATOM   5137  O   HOH W 225       9.312  60.280  65.861  1.00 37.85
ATOM   5138  O   HOH W 226      20.424  20.146  83.661  1.00 32.68
ATOM   5139  O   HOH W 227      10.879  65.256  88.761  1.00 28.17
ATOM   5140  O   HOH W 228       6.481  11.890  66.154  1.00 13.58
ATOM   5141  O   HOH W 229      11.493  12.304  65.667  1.00 31.38
ATOM   5142  O   HOH W 230      23.893  48.760  67.764  1.00 19.58
ATOM   5143  O   HOH W 231      11.826  33.465  74.498  1.00 16.87
ATOM   5144  O   HOH W 232      20.228  48.799  84.083  1.00 14.10
ATOM   5145  O   HOH W 233       8.333  25.989  83.238  1.00 20.03
ATOM   5146  O   HOH W 234      24.244  65.422  90.512  1.00 18.61
ATOM   5147  O   HOH W 235      29.682  43.395  86.674  1.00 29.99
ATOM   5148  O   HOH W 236      32.122  38.935  81.421  1.00 21.98
ATOM   5149  O   HOH W 237      38.098  44.260  70.626  1.00 23.18
ATOM   5150  O   HOH W 238      17.172  68.773  81.829  1.00 33.19
ATOM   5151  O   HOH W 239      22.056  41.676  85.707  1.00 27.98
ATOM   5152  O   HOH W 240      10.609  35.835  76.035  1.00 26.77
ATOM   5153  O   HOH W 241       5.895  48.362  80.563  1.00 35.27
ATOM   5154  O   HOH W 242       4.210  38.365  90.354  1.00 62.63
ATOM   5155  O   HOH W 243      27.505  26.048  57.570  1.00 34.59
ATOM   5156  O   HOH W 244      40.199  29.895  75.610  1.00 30.81
ATOM   5157  O   HOH W 245      41.069  35.070  67.073  1.00 25.75
ATOM   5158  O   HOH W 246      18.209  43.386  70.174  1.00 24.27
ATOM   5159  O   HOH W 247      22.994  40.780  73.297  1.00 35.20
ATOM   5160  O   HOH W 248      11.980  17.646  61.687  1.00 24.63
ATOM   5161  O   HOH W 249      17.092  44.230  71.974  1.00 27.55
ATOM   5162  O   HOH W 250      29.907  45.909  50.610  1.00 33.85
ATOM   5163  O   HOH W 251      25.337  41.587  74.020  1.00 31.92
ATOM   5164  O   HOH W 252      34.320  29.393  64.417  1.00 34.88
ATOM   5165  O   HOH W 253      16.366  57.688  55.311  1.00 30.35
ATOM   5166  O   HOH W 254      25.295  70.347  83.432  1.00 44.62
ATOM   5167  O   HOH W 255      28.780  44.083  69.312  1.00 38.06
ATOM   5168  O   HOH W 256      43.987  44.841  81.855  1.00 26.92
ATOM   5169  O   HOH W 257      10.694  22.780  82.399  1.00 40.18
ATOM   5170  O   HOH W 258       3.209  26.059  69.842  1.00 50.02
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ATOM   5171  O   HOH W 259      25.123  69.880  90.995  1.00 32.08
ATOM   5172  O   HOH W 260      10.460  60.937  72.334  1.00 28.48
ATOM   5173  O   HOH W 261      35.272  43.014  54.933  1.00 35.32
ATOM   5174  O   HOH W 262      31.555  49.428  69.261  1.00 30.03
ATOM   5175  O   HOH W 263      18.455  45.339  74.865  1.00 22.60
ATOM   5176  O   HOH W 264       0.397  52.925  76.187  1.00 26.73
ATOM   5177  O   HOH W 265      24.642  68.564  81.573  1.00 27.40
ATOM   5178  O   HOH W 266      25.734  20.393  55.492  1.00 32.87
ATOM   5179  O   HOH W 267      11.923  58.720  70.763  1.00 21.77
ATOM   5180  O   HOH W 268      30.308  43.013  67.201  1.00 35.32
ATOM   5181  O   HOH W 269      39.640  38.126  67.437  1.00 28.94
ATOM   5182  O   HOH W 270      10.397  50.110  41.557  1.00 28.07
ATOM   5183  O   HOH W 271      33.290  46.466  61.539  1.00 27.30
ATOM   5184  O   HOH W 272       0.016  42.090  76.502  1.00 32.33
ATOM   5185  O   HOH W 273      26.563  45.481  40.291  1.00 47.85
ATOM   5186  O   HOH W 274      30.451  15.205  70.110  1.00 33.04
ATOM   5187  O   HOH W 275       0.678  54.618  69.973  1.00 30.37
ATOM   5188  O   HOH W 276      31.009  22.826  58.292  1.00 38.03
ATOM   5189  O   HOH W 277      11.598  18.077  78.103  1.00 32.86
ATOM   5190  O   HOH W 278      42.789  49.257  82.276  1.00 38.27
ATOM   5191  O   HOH W 279      22.610  37.483  44.945  1.00 36.88
ATOM   5192  O   HOH W 280      19.095  19.104  54.480  1.00 29.52
ATOM   5193  O   HOH W 281     -17.217  39.695  36.067  1.00 33.38
ATOM   5194  O   HOH W 282       6.068  42.637  67.543  1.00 33.87
ATOM   5195  O   HOH W 283      20.639  46.522  87.847  1.00 36.70
ATOM   5196  O   HOH W 284      -8.870  56.242  58.240  1.00 50.62
ATOM   5197  O   HOH W 285      16.582  61.670  59.151  1.00 38.20
ATOM   5198  O   HOH W 286      42.501  43.301  75.886  1.00 27.81
ATOM   5199  O   HOH W 287      25.604  33.439  84.786  1.00 21.08
ATOM   5200  O   HOH W 288      13.520  67.352  52.561  1.00 39.75
ATOM   5201  O   HOH W 289       9.627  28.198  45.908  1.00 37.35
ATOM   5202  O   HOH W 290      18.134  36.512  88.493  1.00 43.01
ATOM   5203  O   HOH W 291      22.300  20.482  81.874  1.00 37.81
ATOM   5204  O   HOH W 292      44.203  41.289  79.602  1.00 27.00
ATOM   5205  O   HOH W 293      44.462  52.335  93.395  1.00 32.88
ATOM   5206  O   HOH W 294      -2.968  37.813  43.815  1.00 39.42
ATOM   5207  O   HOH W 295      14.615  50.638  83.483  1.00 40.84
ATOM   5208  O   HOH W 296      17.655  48.236  85.049  1.00 38.41
ATOM   5209  O   HOH W 297      25.105  58.534  70.338  1.00 45.37
ATOM   5210  O   HOH W 298       6.153  22.174  58.465  1.00 51.17
ATOM   5211  O   HOH W 299      14.099  45.045  75.129  1.00 38.12
ATOM   5212  O   HOH W 300       3.614  33.798  78.265  1.00 33.77
ATOM   5213  O   HOH W 301      10.974  62.101  70.086  1.00 31.30
ATOM   5214  O   HOH W 302       7.585  38.532  71.479  1.00 35.66
ATOM   5215  O   HOH W 303      20.998  44.178  74.359  1.00 37.38
ATOM   5216  O   HOH W 304      11.918  38.385  43.252  1.00 35.61
ATOM   5217  O   HOH W 305      34.337  29.948  80.309  1.00 36.78
ATOM   5218  O   HOH W 306      39.120  63.630  75.316  1.00 43.48
ATOM   5219  O   HOH W 307      36.491  64.702  80.717  1.00 19.64
ATOM   5220  O   HOH W 308     -11.598  58.968  55.040  1.00 54.59
ATOM   5221  O   HOH W 309      18.873  53.508  93.447  1.00 29.42
ATOM   5222  O   HOH W 310       7.673  37.412  69.273  1.00 30.92
ATOM   5223  O   HOH W 311      38.494  29.355  71.433  1.00 35.92
ATOM   5224  O   HOH W 312       2.378  64.614  72.106  1.00 23.68
ATOM   5225  O   HOH W 313      34.055  22.747  70.419  1.00 47.42
ATOM   5226  O   HOH W 314       6.517  15.338  63.891  1.00 39.21
ATOM   5227  O   HOH W 315      33.135  58.667  95.357  1.00 38.27
ATOM   5228  O   HOH W 316       7.877  41.088  68.810  1.00 30.88
ATOM   5229  O   HOH W 317       4.500  63.686  62.465  1.00 40.54
ATOM   5230  O   HOH W 318      32.594  44.212  51.619  1.00 28.18
ATOM   5231  O   HOH W 319      19.892  28.363  50.295  1.00 37.48
ATOM   5232  O   HOH W 320      38.121  42.209  58.482  1.00 35.42
ATOM   5233  O   HOH W 321      18.953  60.209  59.879  1.00 32.37
ATOM   5234  O   HOH W 322      -1.038  45.854  73.695  1.00 33.19
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ATOM   5235  O   HOH W 323      -6.723  31.695  78.229  1.00 48.52
ATOM   5236  O   HOH W 324      20.123  41.413  71.190  1.00 40.23
ATOM   5237  O   HOH W 325       5.380  25.588  55.751  1.00 26.30
ATOM   5238  O   HOH W 326      -8.946  53.154  58.636  1.00 33.33
ATOM   5239  O   HOH W 327       5.224  20.615  65.617  1.00 38.04
ATOM   5240  O   HOH W 328      -0.951  44.688  66.660  1.00 48.71
ATOM   5241  O   HOH W 329       9.548  17.972  61.116  1.00 38.57
ATOM   5242  O   HOH W 330      16.170  45.478  46.564  1.00 33.55
ATOM   5243  O   HOH W 331      28.152  31.228  86.919  1.00 66.11
ATOM   5244  O   HOH W 332      -4.227  32.608  61.396  1.00 29.03
ATOM   5245  O   HOH W 333      23.532  69.913  79.399  1.00 40.45
ATOM   5246  O   HOH W 334      16.943  25.394  84.026  1.00 35.64
ATOM   5247  O   HOH W 335      -6.097  33.164  72.143  1.00 47.23
ATOM   5248  O   HOH W 336      26.639  58.545  95.902  1.00 30.17
ATOM   5249  O   HOH W 337      18.090  14.281  77.183  1.00 34.77
ATOM   5250  O   HOH W 338      16.783  69.158  79.498  1.00 41.04
ATOM   5251  O   HOH W 339      44.586  50.422  83.945  1.00 37.92
ATOM   5252  O   HOH W 340      11.828  51.361  43.560  1.00 42.10
ATOM   5253  O   HOH W 341      22.773  36.745  86.817  1.00 38.07
ATOM   5254  O   HOH W 342      26.608  43.969  74.943  1.00 32.64
ATOM   5255  O   HOH W 343      14.797  17.437  79.901  1.00 37.80
ATOM   5256  O   HOH W 344      32.755  40.414  86.886  1.00 53.20
ATOM   5257  O   HOH W 345      23.938  65.851  93.231  1.00 38.25
ATOM   5258  O   HOH W 346      34.689  68.947  70.635  1.00 32.36
ATOM   5259  O   HOH W 347      32.902  14.779  66.467  1.00 55.05
ATOM   5260  O   HOH W 348      -0.197  59.892  61.918  1.00 41.09
ATOM   5261  O   HOH W 349      35.933  50.743  66.825  1.00 29.14
ATOM   5262  O   HOH W 350      21.451  70.196  84.069  1.00 37.63
ATOM   5263  O   HOH W 351      10.392  34.055  71.909  1.00 37.36
ATOM   5264  O   HOH W 352      16.118  48.288  46.594  1.00 33.56
ATOM   5265  O   HOH W 353       2.277  58.481  67.819  1.00 45.09
ATOM   5266  O   HOH W 354     -21.140  42.970  52.987  1.00 38.49
ATOM   5267  O   HOH W 355       0.364  56.797  65.209  1.00 34.76
ATOM   5268  O   HOH W 356       9.763  37.511  72.464  1.00 36.84
ATOM   5269  O   HOH W 357      -3.293  29.651  64.159  1.00 48.44
ATOM   5270  O   HOH W 358      18.653  59.497  55.820  1.00 41.32
ATOM   5271  O   HOH W 359      18.360  56.858  89.365  1.00 16.20
ATOM   5272  O   HOH W 360      19.264  58.334  58.324  1.00 24.32
ATOM   5273  O   HOH W 361      19.786  68.920  85.535  1.00 36.46
ATOM   5274  O   HOH W 362       0.891  46.454  70.028  1.00 49.40
ATOM   5275  O   HOH W 363      13.401  15.156  61.247  1.00 32.90
ATOM   5276  O   HOH W 364      29.937  41.912  73.484  1.00 34.92
ATOM   5277  O   HOH W 365      28.117  39.053  82.612  1.00 29.94
ATOM   5278  O   HOH W 366      17.060  44.064  76.687  1.00 31.64
ATOM   5279  O   HOH W 367       7.781  32.331  42.244  1.00 54.33
ATOM   5280  O   HOH W 368      13.484  60.143  67.092  1.00 36.32
ATOM   5281  O   HOH W 369       4.972  65.695  69.472  1.00 30.93
ATOM   5282  O   HOH W 370      20.859  55.364  94.926  1.00 35.05
ATOM   5283  O   HOH W 371      29.891  64.316  94.062  1.00 32.43
ATOM   5284  O   HOH W 372      31.636  50.857  46.407  1.00 75.60
ATOM   5285  O   HOH W 373      -9.778  35.027  39.632  1.00 56.74
ATOM   5286  O   HOH W 374      14.152  12.701  64.957  1.00 23.80
ATOM   5287  O   HOH W 375      35.419  45.143  64.442  1.00 36.74
ATOM   5288  O   HOH W 376      34.839  57.375  97.888  1.00 34.34
ATOM   5289  O   HOH W 377      35.027  44.946  53.379  1.00 45.25
ATOM   5290  O   HOH W 378      10.904  44.942  78.238  1.00 46.33
ATOM   5291  O   HOH W 379       2.265  29.749  79.673  1.00 55.34
ATOM   5292  O   HOH W 380      38.376  37.663  83.485  1.00 48.83
ATOM   5293  O   HOH W 381       7.069  18.511  64.588  1.00 42.75
ATOM   5294  O   HOH W 382      10.013  63.184  65.119  1.00 51.27
ATOM   5295  O   HOH W 383      26.880  67.265  80.460  1.00 29.17
ATOM   5296  O   HOH W 384       5.435  44.858  39.529  1.00 44.09
ATOM   5297  O   HOH W 385      12.020  76.116  49.503  1.00 57.08
ATOM   5298  O   HOH W 386       4.495  69.223  72.134  1.00 39.49
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ATOM   5299  O   HOH W 387      34.373  34.834  52.407  1.00 45.73
ATOM   5300  O   HOH W 388      -0.366  52.210  68.045  1.00 56.86
ATOM   5301  O   HOH W 389      15.108  39.899  89.165  1.00 30.62
ATOM   5302  O   HOH W 390      20.977  60.725  61.985  1.00 42.08
ATOM   5303  O   HOH W 391      29.038  14.547  63.725  1.00 33.69
ATOM   5304  O   HOH W 392      34.064  66.637  81.988  1.00 37.83
ATOM   5305  O   HOH W 393       8.669  71.915  54.348  1.00 40.01
ATOM   5306  O   HOH W 394       4.823  29.577  79.259  1.00 42.09
ATOM   5307  O   HOH W 395      22.745  32.929  42.078  1.00 50.18
ATOM   5308  O   HOH W 396       0.658  29.749  51.236  1.00 30.86
ATOM   5309  O   HOH W 397       3.793  58.214  86.346  1.00 62.42
ATOM   5310  O   HOH W 398      12.206  40.564  89.850  1.00 39.66
ATOM   5311  O   HOH W 399      21.573  25.561  53.053  1.00 34.62
ATOM   5312  O   HOH W 400      30.197  56.551  58.739  1.00 40.16
ATOM   5313  O   HOH W 401      20.406  59.350  64.941  1.00 33.97
ATOM   5314  O   HOH W 402      16.956  52.960  87.724  1.00 54.35
ATOM   5315  O   HOH W 403      36.719  27.459  68.822  1.00 42.51
ATOM   5316  O   HOH W 404       7.458  27.206  77.481  1.00 46.67
ATOM   5317  O   HOH W 405      36.220  64.298  90.593  1.00 51.29
ATOM   5318  O   HOH W 406     -17.985  43.406  48.900  1.00 41.71
ATOM   5319  O   HOH W 407       1.914  29.246  53.120  1.00 38.28
ATOM   5320  O   HOH W 408      -4.267  29.328  73.970  1.00 34.50
ATOM   5321  O   HOH W 409      14.000  53.360  42.218  1.00 42.56
ATOM   5322  O   HOH W 410       5.615  22.345  61.668  1.00 59.03
ATOM   5323  O   HOH W 411      -3.455  50.442  63.951  1.00 44.90
ATOM   5324  O   HOH W 412      29.002  38.811  44.563  1.00 43.27
ATOM   5325  O   HOH W 413      37.416  55.208  61.603  1.00 42.90
ATOM   5326  O   HOH W 414      14.459  14.960  73.514  1.00 42.33
ATOM   5327  O   HOH W 415      35.076  48.768  98.233  1.00 41.69
ATOM   5328  O   HOH W 416       6.452  56.342  86.263  1.00 34.79
ATOM   5329  O   HOH W 417      35.573  17.694  66.735  1.00 40.65
ATOM   5330  O   HOH W 418      28.756  59.314  74.937  1.00 35.85
ATOM   5331  O   HOH W 419      12.955  64.913  53.664  1.00 37.44
ATOM   5332  O   HOH W 420      23.309  24.474  50.751  1.00 45.73
ATOM   5333  O   HOH W 421       4.924  27.771  55.010  1.00 38.46
ATOM   5334  O   HOH W 422      19.668  63.675  93.111  1.00 41.69
ATOM   5335  O   HOH W 423      29.343  46.551  40.650  1.00 45.12
ATOM   5336  O   HOH W 424      28.230  48.770  60.385  1.00 40.19
ATOM   5337  O   HOH W 425      14.292  23.244  85.078  1.00 32.92
ATOM   5338  O   HOH W 426       7.179  66.298  48.617  1.00 47.43
ATOM   5339  O   HOH W 427     -11.542  35.315  64.224  1.00 45.74
ATOM   5340  O   HOH W 428      -0.665  52.874  80.688  1.00 44.47
ATOM   5341  O   HOH W 429      -1.483  67.437  44.508  1.00 88.79
ATOM   5342  O   HOH W 430      13.367  66.767  63.127  1.00 62.36
ATOM   5343  O   HOH W 431      35.060  48.549  63.034  1.00 39.85
ATOM   5344  O   HOH W 432      11.721  60.705  42.372  1.00 56.11
ATOM   5345  O   HOH W 433      14.261  27.588  85.980  1.00 51.35
ATOM   5346  O   HOH W 434      38.915  34.680  61.103  1.00 45.58
ATOM   5347  O   HOH W 435      23.421  46.416  42.605  1.00 43.02
ATOM   5348  O   HOH W 436      19.154  28.435  86.238  1.00 47.30
ATOM   5349  O   HOH W 437      26.658  43.571  47.275  1.00 34.55
ATOM   5350  O   HOH W 438      15.725  45.758  43.317  1.00 43.06
ATOM   5351  O   HOH W 439      36.546  66.825  82.882  1.00 30.83
ATOM   5352  O   HOH W 440       8.498  74.001  52.039  1.00 46.91
ATOM   5353  O   HOH W 441      27.161  71.692  92.146  1.00 39.00
ATOM   5354  O   HOH W 442      27.946  33.322  85.163  1.00 33.09
ATOM   5355  O   HOH W 443      15.310  10.169  65.089  1.00 63.51
ATOM   5356  O   HOH W 444     -13.474  41.923  71.321  1.00 44.29
ATOM   5357  O   HOH W 445      -6.593  61.419  56.587  1.00 36.57
ATOM   5358  O   HOH W 446      -4.107  19.122  50.753  1.00 80.39
ATOM   5359  O   HOH W 447      21.809  59.754  43.571  1.00 64.03
ATOM   5360  O   HOH W 448      32.503  55.926  51.478  1.00 51.13
ATOM   5361  O   HOH W 449      17.433  44.251  80.196  1.00 52.95
ATOM   5362  O   HOH W 450      -2.882  28.319  76.738  1.00 57.32
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ATOM	5363	O	HOH W 451	8.921	18.143	71.756	1.00	45.59
ATOM	5364	O	HOH W 452	46.415	37.408	72.673	1.00	74.61
ATOM	5365	O	HOH W 453	46.612	53.365	82.940	1.00	41.92
ATOM	5366	O	HOH W 454	39.885	53.691	74.043	1.00	45.59
ATOM	5367	O	HOH W 455	28.187	69.890	80.215	1.00	33.51
ATOM	5368	O	HOH W 456	10.557	47.292	72.599	1.00	14.04
ATOM	5369	O	HOH W 457	-0.687	61.537	70.644	1.00	40.63
ATOM	5370	O	HOH W 458	33.335	31.445	62.420	1.00	32.53
ATOM	5371	O	HOH W 459	26.658	39.474	43.256	1.00	32.50
ATOM	5372	O	HOH W 460	30.185	25.893	82.542	1.00	45.40
ATOM	5373	O	HOH W 461	20.780	39.620	40.793	1.00	60.63
ATOM	5374	O	HOH W 462	-13.804	40.073	67.421	1.00	42.25
ATOM	5375	O	HOH W 463	1.328	41.371	78.681	1.00	56.39
ATOM	5376	O	HOH W 464	33.554	26.796	70.488	1.00	37.48
ATOM	5377	O	HOH W 465	34.317	54.835	70.139	1.00	57.37
ATOM	5378	O	HOH W 466	1.781	11.779	66.821	1.00	47.25
ATOM	5379	O	HOH W 467	13.278	63.141	46.031	1.00	57.79
ATOM	5380	O	HOH W 468	37.787	55.035	100.999	1.00	53.08
ATOM	5381	O	HOH W 469	13.794	19.603	83.707	1.00	47.87
ATOM	5382	O	HOH W 470	25.470	45.716	93.468	1.00	36.66
ATOM	5383	O	HOH W 471	10.578	17.685	75.291	1.00	37.43
ATOM	5384	O	HOH W 472	52.811	39.642	69.739	1.00	44.12
ATOM	5385	O	HOH W 473	23.329	56.116	94.868	1.00	47.73
ATOM	5386	O	HOH W 474	35.936	48.711	65.428	1.00	58.05
ATOM	5387	O	HOH W 475	28.119	66.507	82.635	1.00	41.75
ATOM	5388	O	HOH W 476	-0.565	54.408	74.299	1.00	50.86
ATOM	5389	O	HOH W 477	4.072	70.416	58.486	1.00	35.45
ATOM	5390	O	HOH W 478	-3.762	26.579	63.779	1.00	53.91
ATOM	5391	O	HOH W 479	19.595	35.426	41.883	1.00	51.58
ATOM	5392	O	HOH W 480	24.800	7.578	70.043	1.00	41.13
ATOM	5393	O	HOH W 481	17.947	10.147	65.643	1.00	58.35
ATOM	5394	O	HOH W 482	31.312	44.348	64.437	1.00	48.49
ATOM	5395	O	HOH W 483	46.224	50.030	81.043	1.00	53.87
ATOM	5396	O	HOH W 484	35.129	52.464	51.431	1.00	54.76
ATOM	5397	O	HOH W 485	5.885	65.189	84.813	1.00	83.91
ATOM	5398	O	HOH W 486	20.281	16.200	55.863	1.00	46.25
ATOM	5399	O	HOH W 487	-5.180	21.053	56.028	1.00	37.00
ATOM	5400	O	HOH W 488	-11.188	38.067	41.229	1.00	69.22
ATOM	5401	O	HOH W 489	15.256	67.180	75.313	1.00	51.22
ATOM	5402	O	HOH W 490	3.374	63.019	56.672	1.00	42.46
ATOM	5403	O	HOH W 491	30.082	15.975	73.952	1.00	49.06
ATOM	5404	O	HOH W 492	-7.562	32.348	64.350	1.00	53.88
ATOM	5405	O	HOH W 493	14.504	69.382	77.201	1.00	79.52
ATOM	5406	O	HOH W 494	37.374	41.179	54.837	1.00	41.94
ATOM	5407	O	HOH W 495	22.651	62.725	71.998	1.00	46.62
ATOM	5408	O	HOH W 496	13.052	47.941	46.569	1.00	50.14
ATOM	5409	O	HOH W 497	-1.906	45.997	36.480	1.00	62.33
ATOM	5410	O	HOH W 498	35.740	52.464	53.693	1.00	55.17
ATOM	5411	O	HOH W 499	30.727	32.353	49.843	1.00	56.92
ATOM	5412	O	HOH W 500	0.025	32.686	42.604	1.00	48.23
ATOM	5413	O	HOH W 501	47.830	56.735	86.611	1.00	47.42
ATOM	5414	O	HOH W 502	18.095	60.627	94.715	1.00	65.28
ATOM	5415	O	HOH W 503	2.306	31.026	81.802	1.00	37.32
ATOM	5416	O	HOH W 504	-8.696	27.990	79.237	1.00	46.99
ATOM	5417	O	HOH W 505	22.034	70.217	89.142	1.00	47.15
ATOM	5418	O	HOH W 506	22.136	73.412	87.005	1.00	38.47
ATOM	5419	O	HOH W 507	-0.926	26.674	74.129	1.00	58.76
ATOM	5420	O	HOH W 508	-6.108	48.377	71.102	1.00	64.56
ATOM	5421	O	HOH W 509	39.520	39.424	56.576	1.00	72.80
ATOM	5422	O	HOH W 510	-4.081	58.518	47.377	1.00	60.65
ATOM	5423	O	HOH W 511	34.434	23.876	75.179	1.00	48.53
ATOM	5424	O	HOH W 512	17.400	63.380	50.267	1.00	40.76
ATOM	5425	O	HOH W 513	9.647	61.533	68.296	1.00	46.31
ATOM	5426	O	HOH W 514	41.430	58.961	99.800	1.00	49.23

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ATOM   5427  O   HOH W 515      23.725  20.340  53.830  1.00 51.65
ATOM   5428  O   HOH W 516      15.576  16.190  78.131  1.00 61.27
ATOM   5429  O   HOH W 517      29.334  21.375  75.882  1.00 44.80
ATOM   5430  O   HOH W 518      -1.624  50.514  39.683  1.00 49.85
ATOM   5431  O   HOH W 519       8.771  69.104  72.705  1.00 47.81
ATOM   5432  O   HOH W 520     -21.311  45.001  55.217  1.00 64.01
ATOM   5433  O   HOH W 521      -1.392  54.790  67.171  1.00 53.90
ATOM   5434  O   HOH W 522      38.464  56.277  74.548  1.00 63.93
ATOM   5435  O   HOH W 523      33.977  32.491  81.832  1.00 50.18
ATOM   5436  O   HOH W 524      16.060  54.317  91.714  1.00 61.57
ATOM   5437  O   HOH W 525      21.009  33.700  89.176  1.00 65.31
ATOM   5438  O   HOH W 526      28.726  36.253  85.146  1.00 34.76
ATOM   5439  O   HOH W 527      24.767  40.641  41.912  1.00 44.57
ATOM   5440  O   HOH W 528      40.708  69.261  83.251  1.00 39.08
ATOM   5441  O   HOH W 529      28.264  48.404  92.814  1.00 34.64
ATOM   5442  O   HOH W 530      19.375  61.177  66.689  1.00 44.16
ATOM   5443  O   HOH W 531       6.639  42.598  82.079  1.00100.00
ATOM   5444  O   HOH W 532      40.403  33.306  64.502  1.00 45.36
ATOM   5445  O   HOH W 533      16.172  18.117  52.264  1.00 44.76
ATOM   5446  O   HOH W 534      33.899  42.310  48.851  1.00 52.28
ATOM   5447  O   HOH W 535      22.675   9.894  76.942  1.00 51.28
ATOM   5448  O   HOH W 536     -11.295  52.730  60.674  1.00 76.16
ATOM   5449  O   HOH W 537      20.605  66.466  58.378  1.00 61.62
ATOM   5450  O   HOH W 538      35.282  26.341  50.576  1.00 58.72
ATOM   5451  O   HOH W 539      -0.234  39.225  40.255  1.00 54.13
ATOM   5452  O   HOH W 540      36.597  43.931  57.481  1.00 43.52
ATOM   5453  O   HOH W 541      20.374  41.951  74.120  1.00 47.12
ATOM   5454  O   HOH W 542      31.857  31.721  82.689  1.00 46.66
ATOM   5455  O   HOH W 543      34.733  63.213  92.164  1.00 55.58
ATOM   5456  O   HOH W 544     -20.506  26.471  44.860  1.00 73.89
ATOM   5457  O   HOH W 545      37.699  32.453  62.558  1.00 46.00
ATOM   5458  O   HOH W 546       8.296  38.910  67.642  1.00 39.42
ATOM   5459  O   HOH W 547       0.194  69.671  72.188  1.00 47.07
ATOM   5460  O   HOH W 548      32.212  52.268  51.134  1.00 52.82
ATOM   5461  O   HOH W 549      33.917  21.004  64.439  1.00 26.12
ATOM   5462  O   HOH W 550      42.573  58.916  95.252  1.00 20.78
ATOM   5463  O   HOH W 551      34.529  66.786  72.611  1.00 36.24
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Table 10: Structure coordinates of LTA_4 hydrolase-thiolamine complex

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CRYST    68.560  132.150   83.270  90.00  90.00  90.00 P21212
SCALE1       0.01459   0.00000   0.00000        0.00000
SCALE2       0.00000   0.00757   0.00000        0.00000
SCALE3       0.00000   0.00000   0.01201        0.00000

                Atom res. Chain No.    x       y       z       occ   B-factor
ATOM      1  N   PRO A   1      -0.593  16.387  63.494  1.00 97.99
ATOM      2  CA  PRO A   1      -1.890  16.918  63.874  1.00 97.22
ATOM      3  C   PRO A   1      -2.210  18.371  63.525  1.00100.00
ATOM      4  O   PRO A   1      -2.402  18.667  62.342  1.00100.00
ATOM      5  CB  PRO A   1      -2.130  16.551  65.332  1.00 97.81
ATOM      6  CG  PRO A   1      -1.221  15.355  65.583  1.00100.00
ATOM      7  CD  PRO A   1      -0.290  15.233  64.369  1.00 97.05
ATOM      8  N   GLU A   2      -2.216  19.272  64.556  1.00 96.95
ATOM      9  CA  GLU A   2      -2.569  20.678  64.314  1.00 95.71
ATOM     10  C   GLU A   2      -2.188  21.701  65.386  1.00 94.33
ATOM     11  O   GLU A   2      -2.512  21.542  66.562  1.00 93.21
ATOM     12  CB  GLU A   2      -4.105  20.768  64.214  1.00 97.26
ATOM     13  CG  GLU A   2      -4.587  21.732  63.125  1.00100.00
ATOM     14  CD  GLU A   2      -4.351  21.139  61.767  1.00100.00
ATOM     15  OE1 GLU A   2      -3.301  21.261  61.152  1.00100.00
ATOM     16  OE2 GLU A   2      -5.361  20.398  61.368  1.00100.00
ATOM     17  N   ILE A   3      -1.550  22.799  64.944  1.00 86.29
ATOM     18  CA  ILE A   3      -1.148  23.905  65.820  1.00 81.53
ATOM     19  C   ILE A   3      -2.006  25.154  65.661  1.00 75.68
ATOM     20  O   ILE A   3      -2.835  25.288  64.763  1.00 76.97
ATOM     21  CB  ILE A   3       0.308  24.324  65.707  1.00 83.45
ATOM     22  CG1 ILE A   3       0.452  25.521  64.759  1.00 83.63
ATOM     23  CG2 ILE A   3       1.198  23.160  65.300  1.00 84.76
ATOM     24  CD1 ILE A   3      -0.184  25.361  63.375  1.00 91.36
ATOM     25  N   VAL A   4      -1.725  26.099  66.523  1.00 61.54
ATOM     26  CA  VAL A   4      -2.477  27.303  66.482  1.00 56.32
ATOM     27  C   VAL A   4      -1.658  28.552  66.623  1.00 50.98
ATOM     28  O   VAL A   4      -0.803  28.694  67.512  1.00 47.84
ATOM     29  CB  VAL A   4      -3.514  27.318  67.595  1.00 58.99
ATOM     30  CG1 VAL A   4      -3.735  28.754  68.047  1.00 58.40
ATOM     31  CG2 VAL A   4      -4.819  26.691  67.131  1.00 58.56
ATOM     32  N   ASP A   5      -2.012  29.486  65.732  1.00 39.38
ATOM     33  CA  ASP A   5      -1.403  30.782  65.763  1.00 32.64
ATOM     34  C   ASP A   5      -2.308  31.596  66.634  1.00 36.35
ATOM     35  O   ASP A   5      -3.343  32.051  66.171  1.00 38.30
ATOM     36  CB  ASP A   5      -1.252  31.492  64.400  1.00 30.79
ATOM     37  CG  ASP A   5      -0.251  32.581  64.563  1.00 29.96
ATOM     38  OD1 ASP A   5      -0.069  33.123  65.635  1.00 35.01
ATOM     39  OD2 ASP A   5       0.457  32.831  63.493  1.00 29.81
ATOM     40  N   THR A   6      -1.931  31.745  67.903  1.00 32.32
ATOM     41  CA  THR A   6      -2.710  32.507  68.842  1.00 32.08
ATOM     42  C   THR A   6      -2.701  34.011  68.557  1.00 40.63
ATOM     43  O   THR A   6      -3.484  34.759  69.132  1.00 46.68
ATOM     44  CB  THR A   6      -2.357  32.171  70.295  1.00 44.71
ATOM     45  OG1 THR A   6      -0.967  32.322  70.505  1.00 51.05
ATOM     46  CG2 THR A   6      -2.789  30.741  70.604  1.00 35.79
ATOM     47  N   CYS A   7      -1.842  34.480  67.656  1.00 32.51
ATOM     48  CA  CYS A   7      -1.797  35.923  67.335  1.00 28.92
ATOM     49  C   CYS A   7      -2.627  36.329  66.129  1.00 31.49
ATOM     50  O   CYS A   7      -2.780  37.523  65.875  1.00 25.42
ATOM     51  CB  CYS A   7      -0.362  36.410  67.107  1.00 27.38
ATOM     52  SG  CYS A   7       0.686  35.944  68.518  1.00 32.02
ATOM     53  N   SER A   8      -3.140  35.315  65.383  1.00 34.03
ATOM     54  CA  SER A   8      -3.940  35.508  64.158  1.00 32.97
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ATOM	55	C	SER	A	8	-5.410	35.136	64.264	1.00	33.52
ATOM	56	O	SER	A	8	-5.744	34.137	64.866	1.00	32.89
ATOM	57	CB	SER	A	8	-3.363	34.754	62.980	1.00	34.07
ATOM	58	OG	SER	A	8	-4.017	35.182	61.798	1.00	36.65
ATOM	59	N	LEU	A	9	-6.289	35.921	63.635	1.00	30.79
ATOM	60	CA	LEU	A	9	-7.724	35.649	63.672	1.00	31.91
ATOM	61	C	LEU	A	9	-8.198	35.009	62.377	1.00	36.07
ATOM	62	O	LEU	A	9	-9.359	34.626	62.216	1.00	38.61
ATOM	63	CB	LEU	A	9	-8.514	36.958	63.874	1.00	32.47
ATOM	64	CG	LEU	A	9	-8.306	37.688	65.212	1.00	35.39
ATOM	65	CD1	LEU	A	9	-9.113	38.983	65.193	1.00	32.27
ATOM	66	CD2	LEU	A	9	-8.746	36.816	66.397	1.00	33.25
ATOM	67	N	ALA	A	10	-7.273	34.933	61.443	1.00	28.63
ATOM	68	CA	ALA	A	10	-7.545	34.408	60.147	1.00	27.14
ATOM	69	C	ALA	A	10	-7.643	32.921	60.090	1.00	34.34
ATOM	70	O	ALA	A	10	-7.296	32.173	61.005	1.00	37.34
ATOM	71	CB	ALA	A	10	-6.551	34.936	59.100	1.00	27.72
ATOM	72	N	SER	A	11	-8.130	32.503	58.959	1.00	32.08
ATOM	73	CA	SER	A	11	-8.256	31.115	58.708	1.00	32.03
ATOM	74	C	SER	A	11	-6.838	30.519	58.656	1.00	32.67
ATOM	75	O	SER	A	11	-5.927	31.028	57.986	1.00	29.29
ATOM	76	CB	SER	A	11	-9.013	30.934	57.401	1.00	38.42
ATOM	77	OG	SER	A	11	-10.391	30.728	57.648	1.00	44.17
ATOM	78	N	PRO	A	12	-6.651	29.440	59.387	1.00	29.14
ATOM	79	CA	PRO	A	12	-5.370	28.786	59.476	1.00	26.83
ATOM	80	C	PRO	A	12	-4.935	28.176	58.173	1.00	32.64
ATOM	81	O	PRO	A	12	-5.737	28.007	57.284	1.00	35.89
ATOM	82	CB	PRO	A	12	-5.544	27.698	60.540	1.00	28.28
ATOM	83	CG	PRO	A	12	-7.029	27.571	60.843	1.00	32.92
ATOM	84	CD	PRO	A	12	-7.731	28.587	59.952	1.00	30.42
ATOM	85	N	ALA	A	13	-3.645	27.836	58.063	1.00	30.63
ATOM	86	CA	ALA	A	13	-3.066	27.236	56.855	1.00	28.36
ATOM	87	C	ALA	A	13	-3.644	25.852	56.576	1.00	33.99
ATOM	88	O	ALA	A	13	-3.455	25.240	55.528	1.00	31.60
ATOM	89	CB	ALA	A	13	-1.561	27.133	57.050	1.00	27.68
ATOM	90	N	SER	A	14	-4.338	25.352	57.571	1.00	31.10
ATOM	91	CA	SER	A	14	-4.919	24.069	57.469	1.00	30.66
ATOM	92	C	SER	A	14	-6.242	24.133	56.753	1.00	37.86
ATOM	93	O	SER	A	14	-6.768	23.118	56.328	1.00	45.79
ATOM	94	CB	SER	A	14	-5.005	23.386	58.825	1.00	34.33
ATOM	95	OG	SER	A	14	-6.006	23.978	59.621	1.00	41.01
ATOM	96	N	VAL	A	15	-6.785	25.327	56.630	1.00	32.80
ATOM	97	CA	VAL	A	15	-8.036	25.529	55.917	1.00	31.81
ATOM	98	C	VAL	A	15	-7.777	26.107	54.507	1.00	34.70
ATOM	99	O	VAL	A	15	-8.241	25.576	53.494	1.00	31.96
ATOM	100	CB	VAL	A	15	-9.033	26.336	56.720	1.00	33.07
ATOM	101	CG1	VAL	A	15	-10.272	26.638	55.861	1.00	33.31
ATOM	102	CG2	VAL	A	15	-9.412	25.538	57.949	1.00	30.32
ATOM	103	N	CYS	A	16	-6.990	27.183	54.453	1.00	33.85
ATOM	104	CA	CYS	A	16	-6.602	27.826	53.189	1.00	38.27
ATOM	105	C	CYS	A	16	-5.206	28.388	53.265	1.00	37.14
ATOM	106	O	CYS	A	16	-4.616	28.534	54.322	1.00	39.70
ATOM	107	CB	CYS	A	16	-7.589	28.870	52.581	1.00	42.09
ATOM	108	SG	CYS	A	16	-7.844	30.418	53.540	1.00	47.38
ATOM	109	N	ARG	A	17	-4.679	28.722	52.132	1.00	32.10
ATOM	110	CA	ARG	A	17	-3.349	29.262	52.101	1.00	32.54
ATOM	111	C	ARG	A	17	-3.210	30.307	51.005	1.00	34.56
ATOM	112	O	ARG	A	17	-3.511	30.065	49.842	1.00	35.07
ATOM	113	CB	ARG	A	17	-2.371	28.152	51.758	1.00	36.83
ATOM	114	CG	ARG	A	17	-1.779	27.391	52.915	1.00	40.61
ATOM	115	CD	ARG	A	17	-1.472	25.970	52.503	1.00	27.18
ATOM	116	NE	ARG	A	17	-1.963	25.026	53.501	1.00	52.41
ATOM	117	CZ	ARG	A	17	-1.244	24.036	54.035	1.00	69.41
ATOM	118	NH1	ARG	A	17	0.020	23.812	53.683	1.00	54.86

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ATOM    119  NH2 ARG A  17      -1.810  23.246  54.952  1.00 49.68
ATOM    120  N   THR A  18      -2.711  31.454  51.378  1.00 27.06
ATOM    121  CA  THR A  18      -2.489  32.477  50.428  1.00 26.12
ATOM    122  C   THR A  18      -1.250  32.110  49.653  1.00 30.83
ATOM    123  O   THR A  18      -0.174  31.964  50.194  1.00 29.06
ATOM    124  CB  THR A  18      -2.276  33.810  51.134  1.00 34.27
ATOM    125  OG1 THR A  18      -3.481  34.261  51.738  1.00 32.95
ATOM    126  CG2 THR A  18      -1.730  34.839  50.156  1.00 35.91
ATOM    127  N   LYS A  19      -1.408  31.955  48.365  1.00 31.55
ATOM    128  CA  LYS A  19      -0.298  31.615  47.511  1.00 31.74
ATOM    129  C   LYS A  19       0.359  32.848  46.906  1.00 33.90
ATOM    130  O   LYS A  19       1.513  32.834  46.520  1.00 34.57
ATOM    131  CB  LYS A  19      -0.795  30.697  46.398  1.00 36.08
ATOM    132  CG  LYS A  19      -1.332  29.368  46.924  1.00 62.54
ATOM    133  CD  LYS A  19      -0.281  28.257  47.057  1.00 82.23
ATOM    134  CE  LYS A  19       0.093  27.880  48.496  1.00 77.50
ATOM    135  NZ  LYS A  19       1.553  27.849  48.745  1.00 55.63
ATOM    136  N   HIS A  20      -0.387  33.928  46.810  1.00 31.40
ATOM    137  CA  HIS A  20       0.160  35.122  46.198  1.00 29.22
ATOM    138  C   HIS A  20      -0.655  36.345  46.517  1.00 34.68
ATOM    139  O   HIS A  20      -1.833  36.239  46.846  1.00 35.34
ATOM    140  CB  HIS A  20       0.123  34.956  44.666  1.00 26.47
ATOM    141  CG  HIS A  20       0.865  36.022  43.970  1.00 26.77
ATOM    142  ND1 HIS A  20       2.249  36.046  43.980  1.00 28.92
ATOM    143  CD2 HIS A  20       0.415  37.091  43.280  1.00 27.43
ATOM    144  CE1 HIS A  20       2.622  37.126  43.301  1.00 28.21
ATOM    145  NE2 HIS A  20       1.536  37.781  42.865  1.00 28.18
ATOM    146  N   LEU A  21       0.000  37.492  46.390  1.00 30.14
ATOM    147  CA  LEU A  21      -0.596  38.782  46.610  1.00 31.02
ATOM    148  C   LEU A  21      -0.134  39.786  45.562  1.00 38.34
ATOM    149  O   LEU A  21       1.073  39.952  45.312  1.00 37.30
ATOM    150  CB  LEU A  21      -0.342  39.363  47.999  1.00 31.30
ATOM    151  CG  LEU A  21      -0.611  40.880  48.047  1.00 32.33
ATOM    152  CD1 LEU A  21      -2.088  41.192  48.324  1.00 27.10
ATOM    153  CD2 LEU A  21       0.277  41.522  49.100  1.00 32.86
ATOM    154  N   HIS A  22      -1.127  40.442  44.951  1.00 35.47
ATOM    155  CA  HIS A  22      -0.895  41.452  43.920  1.00 34.24
ATOM    156  C   HIS A  22      -1.249  42.742  44.550  1.00 33.99
ATOM    157  O   HIS A  22      -2.402  42.957  44.905  1.00 35.72
ATOM    158  CB  HIS A  22      -1.720  41.244  42.624  1.00 33.38
ATOM    159  CG  HIS A  22      -1.350  42.256  41.615  1.00 35.97
ATOM    160  ND1 HIS A  22      -0.030  42.576  41.384  1.00 38.81
ATOM    161  CD2 HIS A  22      -2.125  43.043  40.830  1.00 39.07
ATOM    162  CE1 HIS A  22      -0.019  43.534  40.462  1.00 38.66
ATOM    163  NE2 HIS A  22      -1.262  43.829  40.103  1.00 39.13
ATOM    164  N   LEU A  23      -0.235  43.539  44.757  1.00 30.17
ATOM    165  CA  LEU A  23      -0.416  44.793  45.405  1.00 33.32
ATOM    166  C   LEU A  23      -0.203  45.949  44.440  1.00 44.46
ATOM    167  O   LEU A  23       0.828  46.068  43.761  1.00 44.06
ATOM    168  CB  LEU A  23       0.446  44.882  46.680  1.00 33.72
ATOM    169  CG  LEU A  23      -0.141  45.682  47.871  1.00 33.15
ATOM    170  CD1 LEU A  23       0.780  46.835  48.172  1.00 26.07
ATOM    171  CD2 LEU A  23      -1.539  46.213  47.609  1.00 35.39
ATOM    172  N   ARG A  24      -1.256  46.765  44.395  1.00 42.83
ATOM    173  CA  ARG A  24      -1.406  47.964  43.596  1.00 41.79
ATOM    174  C   ARG A  24      -1.930  49.005  44.562  1.00 39.15
ATOM    175  O   ARG A  24      -3.025  48.859  45.107  1.00 39.85
ATOM    176  CB  ARG A  24      -2.458  47.716  42.504  1.00 46.35
ATOM    177  CG  ARG A  24      -2.054  46.750  41.382  1.00 50.50
ATOM    178  CD  ARG A  24      -2.754  47.058  40.043  1.00 80.27
ATOM    179  NE  ARG A  24      -4.200  46.798  40.062  1.00 95.12
ATOM    180  CZ  ARG A  24      -5.152  47.703  39.826  1.00100.00
ATOM    181  NH1 ARG A  24      -4.863  48.973  39.483  1.00100.00
ATOM    182  NH2 ARG A  24      -6.432  47.326  39.865  1.00100.00
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ATOM    183  N   CYS A  25      -1.164  50.028  44.844  1.00 32.39
ATOM    184  CA  CYS A  25      -1.698  50.969  45.813  1.00 33.30
ATOM    185  C   CYS A  25      -1.061  52.325  45.724  1.00 34.82
ATOM    186  O   CYS A  25      -0.012  52.514  45.076  1.00 31.03
ATOM    187  CB  CYS A  25      -1.503  50.440  47.257  1.00 34.67
ATOM    188  SG  CYS A  25       0.231  50.529  47.798  1.00 38.07
ATOM    189  N   SER A  26      -1.711  53.257  46.418  1.00 34.39
ATOM    190  CA  SER A  26      -1.196  54.601  46.437  1.00 36.77
ATOM    191  C   SER A  26      -0.963  55.133  47.821  1.00 39.85
ATOM    192  O   SER A  26      -1.738  54.853  48.757  1.00 37.56
ATOM    193  CB  SER A  26      -1.889  55.600  45.530  1.00 42.70
ATOM    194  OG  SER A  26      -0.899  56.330  44.824  1.00 61.74
ATOM    195  N   VAL A  27       0.133  55.897  47.886  1.00 39.43
ATOM    196  CA  VAL A  27       0.624  56.583  49.081  1.00 41.31
ATOM    197  C   VAL A  27       0.209  58.043  49.082  1.00 44.32
ATOM    198  O   VAL A  27       0.562  58.799  48.187  1.00 45.24
ATOM    199  CB  VAL A  27       2.135  56.531  49.207  1.00 46.35
ATOM    200  CG1 VAL A  27       2.524  57.207  50.522  1.00 45.62
ATOM    201  CG2 VAL A  27       2.592  55.079  49.178  1.00 47.20
ATOM    202  N   ASP A  28      -0.553  58.417  50.093  1.00 37.94
ATOM    203  CA  ASP A  28      -1.040  59.764  50.237  1.00 35.28
ATOM    204  C   ASP A  28      -0.595  60.366  51.538  1.00 33.85
ATOM    205  O   ASP A  28      -1.181  60.099  52.598  1.00 28.52
ATOM    206  CB  ASP A  28      -2.559  59.807  50.189  1.00 37.09
ATOM    207  CG  ASP A  28      -3.055  61.205  50.095  1.00 55.20
ATOM    208  OD1 ASP A  28      -2.611  62.119  50.767  1.00 59.17
ATOM    209  OD2 ASP A  28      -3.993  61.335  49.192  1.00 61.41
ATOM    210  N   PHE A  29       0.436  61.174  51.405  1.00 36.42
ATOM    211  CA  PHE A  29       1.044  61.888  52.512  1.00 43.07
ATOM    212  C   PHE A  29       0.105  62.928  53.077  1.00 51.14
ATOM    213  O   PHE A  29       0.161  63.279  54.257  1.00 51.35
ATOM    214  CB  PHE A  29       2.410  62.517  52.143  1.00 47.77
ATOM    215  CG  PHE A  29       3.519  61.485  52.079  1.00 50.86
ATOM    216  CD1 PHE A  29       4.066  60.957  53.247  1.00 52.08
ATOM    217  CD2 PHE A  29       3.996  61.001  50.863  1.00 53.94
ATOM    218  CE1 PHE A  29       5.075  59.995  53.215  1.00 52.83
ATOM    219  CE2 PHE A  29       5.013  60.046  50.813  1.00 56.46
ATOM    220  CZ  PHE A  29       5.559  59.538  51.992  1.00 53.39
ATOM    221  N   THR A  30      -0.766  63.420  52.220  1.00 47.10
ATOM    222  CA  THR A  30      -1.718  64.386  52.654  1.00 45.48
ATOM    223  C   THR A  30      -2.788  63.715  53.509  1.00 48.41
ATOM    224  O   THR A  30      -3.045  64.082  54.649  1.00 48.64
ATOM    225  CB  THR A  30      -2.283  65.097  51.434  1.00 54.06
ATOM    226  OG1 THR A  30      -1.428  66.186  51.107  1.00 50.68
ATOM    227  CG2 THR A  30      -3.697  65.568  51.745  1.00 60.28
ATOM    228  N   ARG A  31      -3.392  62.683  52.978  1.00 46.66
ATOM    229  CA  ARG A  31      -4.404  61.987  53.734  1.00 47.88
ATOM    230  C   ARG A  31      -3.826  60.999  54.750  1.00 45.46
ATOM    231  O   ARG A  31      -4.590  60.468  55.551  1.00 41.52
ATOM    232  CB  ARG A  31      -5.335  61.214  52.805  1.00 56.73
ATOM    233  CG  ARG A  31      -5.950  62.065  51.700  1.00 84.16
ATOM    234  CD  ARG A  31      -7.338  61.568  51.284  1.00100.00
ATOM    235  NE  ARG A  31      -7.344  60.450  50.327  1.00100.00
ATOM    236  CZ  ARG A  31      -8.148  60.371  49.251  1.00100.00
ATOM    237  NH1 ARG A  31      -9.034  61.324  48.944  1.00100.00
ATOM    238  NH2 ARG A  31      -8.062  59.298  48.460  1.00100.00
ATOM    239  N   ARG A  32      -2.489  60.752  54.683  1.00 39.71
ATOM    240  CA  ARG A  32      -1.751  59.798  55.531  1.00 39.09
ATOM    241  C   ARG A  32      -2.324  58.411  55.379  1.00 39.62
ATOM    242  O   ARG A  32      -2.495  57.655  56.337  1.00 33.10
ATOM    243  CB  ARG A  32      -1.523  60.115  57.022  1.00 37.14
ATOM    244  CG  ARG A  32      -1.197  61.569  57.337  1.00 71.25
ATOM    245  CD  ARG A  32       0.277  61.834  57.686  1.00100.00
ATOM    246  NE  ARG A  32       0.703  61.299  58.986  1.00100.00
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ATOM	247	CZ	ARG	A	32	1.284	62.005	59.961	1.00	79.51
ATOM	248	NH1	ARG	A	32	1.522	63.308	59.831	1.00	55.73
ATOM	249	NH2	ARG	A	32	1.626	61.387	61.098	1.00	44.96
ATOM	250	N	THR	A	33	-2.612	58.068	54.139	1.00	39.83
ATOM	251	CA	THR	A	33	-3.162	56.752	53.902	1.00	39.31
ATOM	252	C	THR	A	33	-2.543	56.010	52.760	1.00	41.13
ATOM	253	O	THR	A	33	-1.853	56.574	51.926	1.00	42.93
ATOM	254	CB	THR	A	33	-4.635	56.835	53.641	1.00	43.44
ATOM	255	OG1	THR	A	33	-4.798	57.636	52.468	1.00	40.17
ATOM	256	CG2	THR	A	33	-5.245	57.468	54.880	1.00	38.71
ATOM	257	N	LEU	A	34	-2.822	54.717	52.762	1.00	35.26
ATOM	258	CA	LEU	A	34	-2.372	53.799	51.745	1.00	35.20
ATOM	259	C	LEU	A	34	-3.632	53.293	51.098	1.00	32.49
ATOM	260	O	LEU	A	34	-4.474	52.670	51.751	1.00	30.96
ATOM	261	CB	LEU	A	34	-1.522	52.651	52.322	1.00	37.07
ATOM	262	CG	LEU	A	34	-0.149	52.571	51.685	1.00	42.99
ATOM	263	CD1	LEU	A	34	0.648	51.425	52.285	1.00	40.58
ATOM	264	CD2	LEU	A	34	-0.360	52.302	50.208	1.00	50.83
ATOM	265	N	THR	A	35	-3.800	53.632	49.838	1.00	28.72
ATOM	266	CA	THR	A	35	-5.017	53.228	49.198	1.00	31.26
ATOM	267	C	THR	A	35	-4.838	52.329	48.013	1.00	36.54
ATOM	268	O	THR	A	35	-3.940	52.546	47.187	1.00	34.70
ATOM	269	CB	THR	A	35	-5.877	54.427	48.813	1.00	44.88
ATOM	270	OG1	THR	A	35	-5.484	55.549	49.579	1.00	58.59
ATOM	271	CG2	THR	A	35	-7.324	54.094	49.109	1.00	49.42
ATOM	272	N	GLY	A	36	-5.726	51.329	47.950	1.00	32.57
ATOM	273	CA	GLY	A	36	-5.696	50.405	46.837	1.00	33.89
ATOM	274	C	GLY	A	36	-6.418	49.074	46.993	1.00	34.50
ATOM	275	O	GLY	A	36	-7.441	48.919	47.678	1.00	31.78
ATOM	276	N	THR	A	37	-5.836	48.103	46.293	1.00	35.93
ATOM	277	CA	THR	A	37	-6.327	46.723	46.281	1.00	36.12
ATOM	278	C	THR	A	37	-5.268	45.696	46.473	1.00	35.67
ATOM	279	O	THR	A	37	-4.155	45.795	45.964	1.00	33.86
ATOM	280	CB	THR	A	37	-7.119	46.306	45.050	1.00	42.21
ATOM	281	OG1	THR	A	37	-6.507	46.804	43.870	1.00	30.98
ATOM	282	CG2	THR	A	37	-8.547	46.793	45.229	1.00	50.03
ATOM	283	N	ALA	A	38	-5.687	44.705	47.220	1.00	32.95
ATOM	284	CA	ALA	A	38	-4.886	43.570	47.533	1.00	33.45
ATOM	285	C	ALA	A	38	-5.481	42.374	46.824	1.00	35.47
ATOM	286	O	ALA	A	38	-6.580	41.906	47.151	1.00	32.91
ATOM	287	CB	ALA	A	38	-4.845	43.341	49.044	1.00	33.72
ATOM	288	N	ALA	A	39	-4.764	41.874	45.834	1.00	32.70
ATOM	289	CA	ALA	A	39	-5.274	40.702	45.140	1.00	31.59
ATOM	290	C	ALA	A	39	-4.692	39.464	45.770	1.00	32.11
ATOM	291	O	ALA	A	39	-3.514	39.147	45.608	1.00	32.46
ATOM	292	CB	ALA	A	39	-4.934	40.729	43.662	1.00	32.13
ATOM	293	N	LEU	A	40	-5.505	38.774	46.508	1.00	27.06
ATOM	294	CA	LEU	A	40	-5.001	37.593	47.155	1.00	29.04
ATOM	295	C	LEU	A	40	-5.331	36.322	46.364	1.00	36.88
ATOM	296	O	LEU	A	40	-6.485	36.100	45.963	1.00	28.89
ATOM	297	CB	LEU	A	40	-5.587	37.451	48.600	1.00	29.39
ATOM	298	CG	LEU	A	40	-5.303	38.598	49.559	1.00	31.39
ATOM	299	CD1	LEU	A	40	-5.435	38.063	50.970	1.00	32.62
ATOM	300	CD2	LEU	A	40	-3.879	39.019	49.355	1.00	31.60
ATOM	301	N	THR	A	41	-4.310	35.470	46.165	1.00	42.40
ATOM	302	CA	THR	A	41	-4.523	34.210	45.488	1.00	43.93
ATOM	303	C	THR	A	41	-4.548	33.155	46.552	1.00	43.75
ATOM	304	O	THR	A	41	-3.510	32.827	47.115	1.00	45.22
ATOM	305	CB	THR	A	41	-3.511	33.892	44.402	1.00	55.44
ATOM	306	OG1	THR	A	41	-3.604	34.885	43.418	1.00	55.57
ATOM	307	CG2	THR	A	41	-3.872	32.544	43.802	1.00	47.78
ATOM	308	N	VAL	A	42	-5.755	32.688	46.848	1.00	33.25
ATOM	309	CA	VAL	A	42	-5.946	31.720	47.893	1.00	32.21
ATOM	310	C	VAL	A	42	-6.166	30.312	47.380	1.00	40.56

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ATOM    311  O   VAL A  42      -6.827  30.105  46.376  1.00 42.56
ATOM    312  CB  VAL A  42      -7.017  32.153  48.920  1.00 36.45
ATOM    313  CG1 VAL A  42      -6.817  31.451  50.266  1.00 36.89
ATOM    314  CG2 VAL A  42      -6.963  33.665  49.170  1.00 36.10
ATOM    315  N   GLN A  43      -5.590  29.357  48.117  1.00 35.91
ATOM    316  CA  GLN A  43      -5.678  27.945  47.838  1.00 31.59
ATOM    317  C   GLN A  43      -6.346  27.244  48.988  1.00 38.98
ATOM    318  O   GLN A  43      -5.916  27.317  50.144  1.00 40.92
ATOM    319  CB  GLN A  43      -4.305  27.319  47.568  1.00 30.50
ATOM    320  CG  GLN A  43      -4.362  25.800  47.259  1.00 53.80
ATOM    321  CD  GLN A  43      -2.986  25.177  47.099  1.00 62.47
ATOM    322  OE1 GLN A  43      -2.569  24.842  45.978  1.00 57.34
ATOM    323  NE2 GLN A  43      -2.274  25.037  48.224  1.00 43.72
ATOM    324  N   SER A  44      -7.423  26.555  48.664  1.00 33.83
ATOM    325  CA  SER A  44      -8.166  25.839  49.678  1.00 31.38
ATOM    326  C   SER A  44      -7.495  24.557  50.117  1.00 42.10
ATOM    327  O   SER A  44      -6.955  23.814  49.292  1.00 42.78
ATOM    328  CB  SER A  44      -9.576  25.530  49.226  1.00 28.60
ATOM    329  OG  SER A  44     -10.234  24.785  50.224  1.00 34.57
ATOM    330  N   GLN A  45      -7.579  24.286  51.423  1.00 38.84
ATOM    331  CA  GLN A  45      -7.007  23.082  51.994  1.00 37.05
ATOM    332  C   GLN A  45      -8.082  22.050  52.269  1.00 47.57
ATOM    333  O   GLN A  45      -7.801  20.917  52.678  1.00 42.94
ATOM    334  CB  GLN A  45      -6.247  23.411  53.280  1.00 36.10
ATOM    335  CG  GLN A  45      -5.246  24.539  53.034  1.00 54.73
ATOM    336  CD  GLN A  45      -4.323  24.206  51.888  1.00 45.43
ATOM    337  OE1 GLN A  45      -4.257  24.888  50.833  1.00 39.23
ATOM    338  NE2 GLN A  45      -3.621  23.121  52.092  1.00 29.80
ATOM    339  N   GLU A  46      -9.330  22.459  52.048  1.00 50.54
ATOM    340  CA  GLU A  46     -10.454  21.573  52.283  1.00 50.99
ATOM    341  C   GLU A  46     -11.496  21.583  51.179  1.00 54.49
ATOM    342  O   GLU A  46     -11.518  22.406  50.261  1.00 54.00
ATOM    343  CB  GLU A  46     -11.139  21.793  53.657  1.00 51.61
ATOM    344  CG  GLU A  46     -10.581  22.979  54.454  1.00 55.93
ATOM    345  CD  GLU A  46     -11.427  23.329  55.646  1.00 78.67
ATOM    346  OE1 GLU A  46     -12.563  23.765  55.543  1.00 69.56
ATOM    347  OE2 GLU A  46     -10.814  23.129  56.796  1.00 75.10
ATOM    348  N   ASP A  47     -12.387  20.630  51.300  1.00 48.90
ATOM    349  CA  ASP A  47     -13.450  20.549  50.362  1.00 49.03
ATOM    350  C   ASP A  47     -14.591  21.425  50.846  1.00 55.15
ATOM    351  O   ASP A  47     -14.760  21.631  52.044  1.00 56.66
ATOM    352  CB  ASP A  47     -13.913  19.099  50.227  1.00 50.20
ATOM    353  CG  ASP A  47     -13.083  18.376  49.218  1.00 66.88
ATOM    354  OD1 ASP A  47     -12.340  18.945  48.434  1.00 66.27
ATOM    355  OD2 ASP A  47     -13.235  17.081  49.284  1.00 76.37
ATOM    356  N   ASN A  48     -15.391  21.941  49.929  1.00 50.25
ATOM    357  CA  ASN A  48     -16.519  22.755  50.339  1.00 48.45
ATOM    358  C   ASN A  48     -16.115  24.000  51.115  1.00 43.07
ATOM    359  O   ASN A  48     -16.699  24.351  52.138  1.00 39.78
ATOM    360  CB  ASN A  48     -17.559  21.909  51.117  1.00 51.19
ATOM    361  CG  ASN A  48     -18.985  22.417  51.005  1.00 76.39
ATOM    362  OD1 ASN A  48     -19.594  22.348  49.929  1.00 85.15
ATOM    363  ND2 ASN A  48     -19.515  22.928  52.115  1.00 68.29
ATOM    364  N   LEU A  49     -15.113  24.688  50.628  1.00 35.36
ATOM    365  CA  LEU A  49     -14.728  25.874  51.335  1.00 34.40
ATOM    366  C   LEU A  49     -15.601  27.009  50.851  1.00 47.38
ATOM    367  O   LEU A  49     -15.421  27.515  49.734  1.00 45.47
ATOM    368  CB  LEU A  49     -13.239  26.152  51.173  1.00 31.04
ATOM    369  CG  LEU A  49     -12.781  27.394  51.885  1.00 29.82
ATOM    370  CD1 LEU A  49     -12.725  27.137  53.385  1.00 28.15
ATOM    371  CD2 LEU A  49     -11.394  27.753  51.368  1.00 30.24
ATOM    372  N   ARG A  50     -16.568  27.363  51.699  1.00 50.49
ATOM    373  CA  ARG A  50     -17.560  28.392  51.401  1.00 52.83
ATOM    374  C   ARG A  50     -17.169  29.838  51.702  1.00 55.57
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ATOM    375  O   ARG A  50     -17.627  30.760  51.011  1.00 53.89
ATOM    376  CB  ARG A  50     -18.928  28.028  51.986  1.00 58.35
ATOM    377  CG  ARG A  50     -19.863  27.354  50.980  1.00 74.76
ATOM    378  CD  ARG A  50     -20.438  26.024  51.462  1.00 81.60
ATOM    379  NE  ARG A  50     -21.214  25.355  50.415  1.00 94.37
ATOM    380  CZ  ARG A  50     -22.465  24.888  50.538  1.00100.00
ATOM    381  NH1 ARG A  50     -23.151  24.990  51.687  1.00100.00
ATOM    382  NH2 ARG A  50     -23.046  24.297  49.471  1.00 74.34
ATOM    383  N   SER A  51     -16.331  30.006  52.743  1.00 54.71
ATOM    384  CA  SER A  51     -15.823  31.297  53.224  1.00 53.49
ATOM    385  C   SER A  51     -14.495  31.156  53.955  1.00 53.57
ATOM    386  O   SER A  51     -14.146  30.062  54.420  1.00 52.93
ATOM    387  CB  SER A  51     -16.788  31.900  54.232  1.00 54.03
ATOM    388  OG  SER A  51     -16.871  31.048  55.373  1.00 45.15
ATOM    389  N   LEU A  52     -13.796  32.298  54.067  1.00 47.19
ATOM    390  CA  LEU A  52     -12.519  32.422  54.762  1.00 45.66
ATOM    391  C   LEU A  52     -12.415  33.671  55.640  1.00 50.43
ATOM    392  O   LEU A  52     -13.145  34.633  55.471  1.00 52.64
ATOM    393  CB  LEU A  52     -11.235  32.117  53.923  1.00 44.20
ATOM    394  CG  LEU A  52     -10.896  33.044  52.745  1.00 43.98
ATOM    395  CD1 LEU A  52     -11.739  32.687  51.554  1.00 42.82
ATOM    396  CD2 LEU A  52     -11.128  34.501  53.094  1.00 44.71
ATOM    397  N   VAL A  53     -11.483  33.658  56.579  1.00 44.97
ATOM    398  CA  VAL A  53     -11.271  34.781  57.455  1.00 41.69
ATOM    399  C   VAL A  53      -9.859  35.309  57.339  1.00 44.25
ATOM    400  O   VAL A  53      -8.866  34.551  57.302  1.00 45.42
ATOM    401  CB  VAL A  53     -11.565  34.420  58.906  1.00 45.48
ATOM    402  CG1 VAL A  53     -11.223  35.554  59.853  1.00 44.94
ATOM    403  CG2 VAL A  53     -13.030  34.073  59.050  1.00 45.79
ATOM    404  N   LEU A  54      -9.796  36.627  57.166  1.00 35.12
ATOM    405  CA  LEU A  54      -8.555  37.333  57.080  1.00 34.14
ATOM    406  C   LEU A  54      -8.377  38.207  58.326  1.00 38.92
ATOM    407  O   LEU A  54      -9.281  38.457  59.108  1.00 37.45
ATOM    408  CB  LEU A  54      -8.461  38.216  55.831  1.00 34.73
ATOM    409  CG  LEU A  54      -8.539  37.469  54.510  1.00 40.25
ATOM    410  CD1 LEU A  54      -8.416  38.488  53.374  1.00 40.69
ATOM    411  CD2 LEU A  54      -7.424  36.428  54.415  1.00 39.64
ATOM    412  N   ASP A  55      -7.192  38.674  58.524  1.00 35.02
ATOM    413  CA  ASP A  55      -6.918  39.526  59.627  1.00 31.65
ATOM    414  C   ASP A  55      -6.956  40.941  59.078  1.00 40.38
ATOM    415  O   ASP A  55      -6.754  41.151  57.886  1.00 39.98
ATOM    416  CB  ASP A  55      -5.494  39.232  60.075  1.00 30.92
ATOM    417  CG  ASP A  55      -5.397  38.103  61.037  1.00 35.96
ATOM    418  OD1 ASP A  55      -6.049  38.074  62.066  1.00 38.49
ATOM    419  OD2 ASP A  55      -4.491  37.205  60.682  1.00 36.53
ATOM    420  N   THR A  56      -7.196  41.900  59.963  1.00 42.93
ATOM    421  CA  THR A  56      -7.243  43.334  59.661  1.00 41.75
ATOM    422  C   THR A  56      -7.101  44.128  60.967  1.00 37.46
ATOM    423  O   THR A  56      -7.517  43.687  62.049  1.00 36.98
ATOM    424  CB  THR A  56      -8.514  43.825  58.894  1.00 37.17
ATOM    425  OG1 THR A  56      -9.587  43.957  59.805  1.00 31.84
ATOM    426  CG2 THR A  56      -8.910  42.943  57.714  1.00 33.58
ATOM    427  N   LYS A  57      -6.513  45.304  60.863  1.00 26.63
ATOM    428  CA  LYS A  57      -6.363  46.134  62.020  1.00 25.64
ATOM    429  C   LYS A  57      -6.585  47.539  61.547  1.00 30.08
ATOM    430  O   LYS A  57      -5.854  48.012  60.711  1.00 25.68
ATOM    431  CB  LYS A  57      -4.991  45.983  62.641  1.00 27.34
ATOM    432  CG  LYS A  57      -4.907  46.387  64.100  1.00 35.83
ATOM    433  CD  LYS A  57      -3.514  46.904  64.471  1.00 35.57
ATOM    434  CE  LYS A  57      -2.901  46.225  65.689  1.00 50.54
ATOM    435  NZ  LYS A  57      -2.521  47.180  66.757  1.00 55.43
ATOM    436  N   ASP A  58      -7.617  48.188  62.065  1.00 32.68
ATOM    437  CA  ASP A  58      -7.895  49.545  61.665  1.00 35.27
ATOM    438  C   ASP A  58      -7.894  49.710  60.149  1.00 38.24
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ATOM    439  O   ASP A  58      -7.289  50.627  59.571  1.00 35.86
ATOM    440  CB  ASP A  58      -6.968  50.550  62.386  1.00 37.22
ATOM    441  CG  ASP A  58      -7.041  50.393  63.880  1.00 50.71
ATOM    442  OD1 ASP A  58      -8.073  50.136  64.478  1.00 57.20
ATOM    443  OD2 ASP A  58      -5.878  50.562  64.463  1.00 45.82
ATOM    444  N   LEU A  59      -8.604  48.796  59.516  1.00 37.68
ATOM    445  CA  LEU A  59      -8.720  48.813  58.079  1.00 39.36
ATOM    446  C   LEU A  59     -10.077  49.243  57.555  1.00 45.51
ATOM    447  O   LEU A  59     -11.146  48.946  58.120  1.00 44.18
ATOM    448  CB  LEU A  59      -8.265  47.506  57.422  1.00 38.42
ATOM    449  CG  LEU A  59      -6.762  47.475  57.218  1.00 37.40
ATOM    450  CD1 LEU A  59      -6.392  46.173  56.526  1.00 36.39
ATOM    451  CD2 LEU A  59      -6.321  48.655  56.361  1.00 36.57
ATOM    452  N   THR A  60      -9.984  49.949  56.437  1.00 42.59
ATOM    453  CA  THR A  60     -11.132  50.483  55.734  1.00 42.63
ATOM    454  C   THR A  60     -11.357  49.705  54.463  1.00 38.18
ATOM    455  O   THR A  60     -10.632  49.856  53.454  1.00 34.33
ATOM    456  CB  THR A  60     -11.030  52.028  55.532  1.00 65.15
ATOM    457  OG1 THR A  60     -11.806  52.736  56.504  1.00 67.56
ATOM    458  CG2 THR A  60     -11.345  52.480  54.104  1.00 56.89
ATOM    459  N   ILE A  61     -12.360  48.847  54.571  1.00 33.39
ATOM    460  CA  ILE A  61     -12.753  47.975  53.482  1.00 35.89
ATOM    461  C   ILE A  61     -13.726  48.634  52.533  1.00 41.05
ATOM    462  O   ILE A  61     -14.913  48.706  52.840  1.00 40.08
ATOM    463  CB  ILE A  61     -13.403  46.670  53.944  1.00 39.71
ATOM    464  CG1 ILE A  61     -12.482  45.826  54.832  1.00 39.90
ATOM    465  CG2 ILE A  61     -13.788  45.900  52.691  1.00 38.96
ATOM    466  CD1 ILE A  61     -11.027  45.851  54.358  1.00 49.61
ATOM    467  N   GLU A  62     -13.219  49.080  51.391  1.00 40.23
ATOM    468  CA  GLU A  62     -14.040  49.700  50.365  1.00 41.73
ATOM    469  C   GLU A  62     -14.986  48.633  49.826  1.00 47.09
ATOM    470  O   GLU A  62     -16.207  48.726  49.926  1.00 47.52
ATOM    471  CB  GLU A  62     -13.138  50.272  49.239  1.00 44.08
ATOM    472  CG  GLU A  62     -13.765  51.406  48.381  1.00 64.08
ATOM    473  CD  GLU A  62     -14.686  50.946  47.256  1.00100.00
ATOM    474  OE1 GLU A  62     -15.458  50.002  47.376  1.00100.00
ATOM    475  OE2 GLU A  62     -14.591  51.670  46.146  1.00 75.11
ATOM    476  N   LYS A  63     -14.399  47.580  49.267  1.00 43.46
ATOM    477  CA  LYS A  63     -15.168  46.474  48.746  1.00 40.53
ATOM    478  C   LYS A  63     -14.250  45.307  48.489  1.00 45.38
ATOM    479  O   LYS A  63     -13.046  45.500  48.362  1.00 43.51
ATOM    480  CB  LYS A  63     -15.818  46.830  47.428  1.00 40.46
ATOM    481  CG  LYS A  63     -14.789  46.959  46.321  1.00 20.53
ATOM    482  CD  LYS A  63     -15.367  47.555  45.054  1.00 28.36
ATOM    483  CE  LYS A  63     -14.315  48.158  44.139  1.00 40.61
ATOM    484  NZ  LYS A  63     -14.588  47.938  42.711  1.00 54.71
ATOM    485  N   VAL A  64     -14.862  44.116  48.441  1.00 45.57
ATOM    486  CA  VAL A  64     -14.190  42.844  48.171  1.00 44.90
ATOM    487  C   VAL A  64     -14.666  42.263  46.841  1.00 46.44
ATOM    488  O   VAL A  64     -15.826  41.917  46.700  1.00 45.81
ATOM    489  CB  VAL A  64     -14.505  41.748  49.192  1.00 46.24
ATOM    490  CG1 VAL A  64     -13.864  40.471  48.669  1.00 44.81
ATOM    491  CG2 VAL A  64     -14.040  42.048  50.627  1.00 44.77
ATOM    492  N   VAL A  65     -13.793  42.099  45.875  1.00 43.10
ATOM    493  CA  VAL A  65     -14.240  41.537  44.604  1.00 41.42
ATOM    494  C   VAL A  65     -13.707  40.156  44.282  1.00 42.13
ATOM    495  O   VAL A  65     -12.605  39.787  44.660  1.00 42.64
ATOM    496  CB  VAL A  65     -13.856  42.462  43.484  1.00 44.58
ATOM    497  CG1 VAL A  65     -14.520  42.037  42.189  1.00 42.79
ATOM    498  CG2 VAL A  65     -14.264  43.874  43.883  1.00 45.05
ATOM    499  N   ILE A  66     -14.515  39.402  43.556  1.00 38.68
ATOM    500  CA  ILE A  66     -14.179  38.053  43.113  1.00 39.98
ATOM    501  C   ILE A  66     -14.899  37.774  41.802  1.00 44.86
ATOM    502  O   ILE A  66     -16.136  37.735  41.729  1.00 42.69
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ATOM    503  CB  ILE A  66     -14.520  36.947  44.113  1.00 44.28
ATOM    504  CG1 ILE A  66     -13.813  37.127  45.445  1.00 47.27
ATOM    505  CG2 ILE A  66     -14.141  35.578  43.550  1.00 42.84
ATOM    506  CD1 ILE A  66     -14.352  36.169  46.514  1.00 38.79
ATOM    507  N   ASN A  67     -14.120  37.549  40.759  1.00 42.94
ATOM    508  CA  ASN A  67     -14.715  37.266  39.472  1.00 44.24
ATOM    509  C   ASN A  67     -15.541  38.444  39.008  1.00 54.25
ATOM    510  O   ASN A  67     -16.743  38.344  38.768  1.00 57.56
ATOM    511  CB  ASN A  67     -15.595  36.007  39.507  1.00 40.72
ATOM    512  CG  ASN A  67     -14.788  34.759  39.745  1.00 57.39
ATOM    513  OD1 ASN A  67     -13.581  34.711  39.454  1.00 52.63
ATOM    514  ND2 ASN A  67     -15.446  33.760  40.317  1.00 44.54
ATOM    515  N   GLY A  68     -14.876  39.574  38.899  1.00 50.43
ATOM    516  CA  GLY A  68     -15.517  40.796  38.462  1.00 48.89
ATOM    517  C   GLY A  68     -16.807  41.115  39.194  1.00 48.77
ATOM    518  O   GLY A  68     -17.523  42.018  38.803  1.00 51.39
ATOM    519  N   GLN A  69     -17.129  40.385  40.244  1.00 40.06
ATOM    520  CA  GLN A  69     -18.348  40.716  40.928  1.00 40.02
ATOM    521  C   GLN A  69     -18.031  41.059  42.364  1.00 50.45
ATOM    522  O   GLN A  69     -16.943  40.748  42.855  1.00 50.53
ATOM    523  CB  GLN A  69     -19.415  39.602  40.829  1.00 40.78
ATOM    524  CG  GLN A  69     -19.966  39.367  39.414  1.00 23.77
ATOM    525  CD  GLN A  69     -20.513  40.646  38.831  1.00 56.53
ATOM    526  OE1 GLN A  69     -19.974  41.198  37.859  1.00 55.28
ATOM    527  NE2 GLN A  69     -21.588  41.134  39.437  1.00 62.26
ATOM    528  N   GLU A  70     -18.975  41.718  43.028  1.00 49.43
ATOM    529  CA  GLU A  70     -18.766  42.094  44.407  1.00 50.67
ATOM    530  C   GLU A  70     -19.296  40.996  45.288  1.00 57.90
ATOM    531  O   GLU A  70     -20.272  40.367  44.909  1.00 63.90
ATOM    532  CB  GLU A  70     -19.449  43.434  44.732  1.00 52.26
ATOM    533  CG  GLU A  70     -18.824  44.624  43.970  1.00 64.80
ATOM    534  CD  GLU A  70     -19.181  45.967  44.555  1.00 91.82
ATOM    535  OE1 GLU A  70     -19.749  46.108  45.629  1.00100.00
ATOM    536  OE2 GLU A  70     -18.814  46.963  43.785  1.00 76.01
ATOM    537  N   VAL A  71     -18.655  40.742  46.433  1.00 47.28
ATOM    538  CA  VAL A  71     -19.119  39.685  47.335  1.00 43.84
ATOM    539  C   VAL A  71     -19.434  40.153  48.768  1.00 41.62
ATOM    540  O   VAL A  71     -18.983  41.206  49.254  1.00 35.70
ATOM    541  CB  VAL A  71     -18.308  38.361  47.273  1.00 46.05
ATOM    542  CG1 VAL A  71     -18.062  37.923  45.827  1.00 45.19
ATOM    543  CG2 VAL A  71     -16.979  38.460  48.017  1.00 45.24
ATOM    544  N   LYS A  72     -20.239  39.343  49.431  1.00 39.34
ATOM    545  CA  LYS A  72     -20.610  39.594  50.792  1.00 42.40
ATOM    546  C   LYS A  72     -19.347  39.466  51.668  1.00 56.92
ATOM    547  O   LYS A  72     -18.399  38.729  51.334  1.00 59.27
ATOM    548  CB  LYS A  72     -21.719  38.629  51.211  1.00 45.76
ATOM    549  CG  LYS A  72     -22.378  38.960  52.557  1.00 86.98
ATOM    550  CD  LYS A  72     -23.898  38.767  52.606  1.00100.00
ATOM    551  CE  LYS A  72     -24.656  40.012  53.077  1.00100.00
ATOM    552  NZ  LYS A  72     -26.011  39.730  53.592  1.00100.00
ATOM    553  N   TYR A  73     -19.332  40.210  52.780  1.00 55.45
ATOM    554  CA  TYR A  73     -18.236  40.226  53.747  1.00 53.31
ATOM    555  C   TYR A  73     -18.636  40.884  55.068  1.00 50.87
ATOM    556  O   TYR A  73     -19.552  41.703  55.139  1.00 47.82
ATOM    557  CB  TYR A  73     -16.891  40.741  53.214  1.00 52.73
ATOM    558  CG  TYR A  73     -16.765  42.244  53.227  1.00 51.76
ATOM    559  CD1 TYR A  73     -16.539  42.946  54.416  1.00 52.82
ATOM    560  CD2 TYR A  73     -16.927  42.967  52.039  1.00 53.30
ATOM    561  CE1 TYR A  73     -16.439  44.340  54.422  1.00 52.71
ATOM    562  CE2 TYR A  73     -16.804  44.359  52.026  1.00 55.39
ATOM    563  CZ  TYR A  73     -16.592  45.044  53.229  1.00 63.45
ATOM    564  OH  TYR A  73     -16.471  46.404  53.215  1.00 69.53
ATOM    565  N   ALA A  74     -17.927  40.494  56.112  1.00 45.37
ATOM    566  CA  ALA A  74     -18.180  40.999  57.433  1.00 42.62
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ATOM    567  C   ALA A  74     -16.892  41.265  58.222  1.00 47.81
ATOM    568  O   ALA A  74     -15.894  40.554  58.133  1.00 45.50
ATOM    569  CB  ALA A  74     -19.111  40.035  58.170  1.00 40.75
ATOM    570  N   LEU A  75     -16.930  42.323  59.005  1.00 49.02
ATOM    571  CA  LEU A  75     -15.829  42.693  59.869  1.00 48.85
ATOM    572  C   LEU A  75     -16.319  42.464  61.281  1.00 47.18
ATOM    573  O   LEU A  75     -17.309  43.021  61.687  1.00 44.35
ATOM    574  CB  LEU A  75     -15.332  44.136  59.675  1.00 49.64
ATOM    575  CG  LEU A  75     -14.789  44.357  58.270  1.00 58.09
ATOM    576  CD1 LEU A  75     -14.524  45.841  58.023  1.00 61.34
ATOM    577  CD2 LEU A  75     -13.512  43.565  58.069  1.00 62.34
ATOM    578  N   GLY A  76     -15.647  41.592  62.004  1.00 47.67
ATOM    579  CA  GLY A  76     -16.034  41.281  63.359  1.00 46.79
ATOM    580  C   GLY A  76     -15.495  42.337  64.279  1.00 47.74
ATOM    581  O   GLY A  76     -14.656  43.171  63.882  1.00 42.87
ATOM    582  N   GLU A  77     -15.988  42.311  65.502  1.00 48.32
ATOM    583  CA  GLU A  77     -15.526  43.300  66.431  1.00 52.14
ATOM    584  C   GLU A  77     -14.029  43.195  66.679  1.00 56.71
ATOM    585  O   GLU A  77     -13.418  42.120  66.591  1.00 55.78
ATOM    586  CB  GLU A  77     -16.357  43.341  67.732  1.00 55.55
ATOM    587  CG  GLU A  77     -17.198  42.063  67.969  1.00 79.57
ATOM    588  CD  GLU A  77     -17.440  41.739  69.427  1.00100.00
ATOM    589  OE1 GLU A  77     -16.537  41.435  70.211  1.00100.00
ATOM    590  OE2 GLU A  77     -18.712  41.799  69.770  1.00100.00
ATOM    591  N   ARG A  78     -13.452  44.344  67.000  1.00 54.17
ATOM    592  CA  ARG A  78     -12.041  44.433  67.298  1.00 53.38
ATOM    593  C   ARG A  78     -11.627  43.656  68.579  1.00 58.88
ATOM    594  O   ARG A  78     -12.247  43.767  69.635  1.00 61.35
ATOM    595  CB  ARG A  78     -11.571  45.891  67.367  1.00 41.96
ATOM    596  CG  ARG A  78     -10.050  46.006  67.326  1.00 38.20
ATOM    597  CD  ARG A  78      -9.537  47.411  67.551  1.00 44.73
ATOM    598  NE  ARG A  78      -8.294  47.648  66.842  1.00 66.47
ATOM    599  CZ  ARG A  78      -7.250  48.247  67.389  1.00 97.61
ATOM    600  NH1 ARG A  78      -7.276  48.692  68.645  1.00100.00
ATOM    601  NH2 ARG A  78      -6.151  48.413  66.663  1.00 80.10
ATOM    602  N   GLN A  79     -10.557  42.857  68.463  1.00 49.54
ATOM    603  CA  GLN A  79      -9.995  42.115  69.566  1.00 47.71
ATOM    604  C   GLN A  79      -8.664  42.789  69.865  1.00 49.77
ATOM    605  O   GLN A  79      -7.626  42.421  69.333  1.00 52.63
ATOM    606  CB  GLN A  79      -9.803  40.613  69.240  1.00 49.05
ATOM    607  CG  GLN A  79     -11.109  39.794  69.339  1.00 57.32
ATOM    608  CD  GLN A  79     -11.043  38.435  68.656  1.00 69.51
ATOM    609  OE1 GLN A  79     -10.400  37.480  69.152  1.00 49.72
ATOM    610  NE2 GLN A  79     -11.727  38.340  67.517  1.00 62.60
ATOM    611  N   SER A  80      -8.699  43.826  70.683  1.00 41.74
ATOM    612  CA  SER A  80      -7.490  44.543  71.022  1.00 37.90
ATOM    613  C   SER A  80      -6.437  44.559  69.920  1.00 35.98
ATOM    614  O   SER A  80      -6.736  44.939  68.801  1.00 34.52
ATOM    615  CB  SER A  80      -6.910  44.144  72.372  1.00 39.07
ATOM    616  OG  SER A  80      -7.255  42.803  72.684  1.00 61.32
ATOM    617  N   TYR A  81      -5.206  44.154  70.289  1.00 29.92
ATOM    618  CA  TYR A  81      -4.027  44.114  69.430  1.00 26.45
ATOM    619  C   TYR A  81      -4.163  43.116  68.285  1.00 30.82
ATOM    620  O   TYR A  81      -3.480  43.215  67.269  1.00 34.48
ATOM    621  CB  TYR A  81      -2.727  43.893  70.257  1.00 25.19
ATOM    622  CG  TYR A  81      -2.713  42.491  70.839  1.00 24.57
ATOM    623  CD1 TYR A  81      -3.327  42.247  72.066  1.00 27.27
ATOM    624  CD2 TYR A  81      -2.165  41.410  70.148  1.00 21.82
ATOM    625  CE1 TYR A  81      -3.380  40.975  72.632  1.00 26.49
ATOM    626  CE2 TYR A  81      -2.230  40.122  70.682  1.00 23.48
ATOM    627  CZ  TYR A  81      -2.827  39.908  71.930  1.00 38.28
ATOM    628  OH  TYR A  81      -2.889  38.653  72.493  1.00 42.17
ATOM    629  N   LYS A  82      -5.038  42.136  68.415  1.00 26.97
ATOM    630  CA  LYS A  82      -5.170  41.229  67.293  1.00 27.99
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ATOM    631  C   LYS A  82      -5.867  41.898  66.072  1.00 38.90
ATOM    632  O   LYS A  82      -5.614  41.541  64.900  1.00 37.15
ATOM    633  CB  LYS A  82      -5.785  39.918  67.708  1.00 27.59
ATOM    634  CG  LYS A  82      -5.169  39.451  69.008  1.00 39.68
ATOM    635  CD  LYS A  82      -5.435  37.993  69.350  1.00 46.78
ATOM    636  CE  LYS A  82      -6.414  37.819  70.492  1.00 59.84
ATOM    637  NZ  LYS A  82      -7.097  36.523  70.452  1.00 63.48
ATOM    638  N   GLY A  83      -6.738  42.894  66.367  1.00 35.64
ATOM    639  CA  GLY A  83      -7.512  43.620  65.368  1.00 33.65
ATOM    640  C   GLY A  83      -8.866  42.925  65.111  1.00 32.95
ATOM    641  O   GLY A  83      -9.297  42.063  65.870  1.00 28.28
ATOM    642  N   SER A  84      -9.535  43.300  64.026  1.00 34.51
ATOM    643  CA  SER A  84     -10.839  42.742  63.673  1.00 36.13
ATOM    644  C   SER A  84     -10.796  41.724  62.549  1.00 40.65
ATOM    645  O   SER A  84     -10.173  41.893  61.501  1.00 39.77
ATOM    646  CB  SER A  84     -11.883  43.808  63.383  1.00 37.68
ATOM    647  OG  SER A  84     -11.812  44.832  64.352  1.00 45.14
ATOM    648  N   PRO A  85     -11.491  40.656  62.791  1.00 37.01
ATOM    649  CA  PRO A  85     -11.573  39.559  61.863  1.00 34.91
ATOM    650  C   PRO A  85     -12.459  39.946  60.712  1.00 35.92
ATOM    651  O   PRO A  85     -13.514  40.522  60.941  1.00 35.30
ATOM    652  CB  PRO A  85     -12.227  38.406  62.647  1.00 37.00
ATOM    653  CG  PRO A  85     -12.714  38.981  63.974  1.00 44.97
ATOM    654  CD  PRO A  85     -12.325  40.462  64.004  1.00 40.72
ATOM    655  N   MET A  86     -12.018  39.642  59.487  1.00 30.47
ATOM    656  CA  MET A  86     -12.756  39.960  58.275  1.00 28.55
ATOM    657  C   MET A  86     -13.165  38.683  57.552  1.00 40.49
ATOM    658  O   MET A  86     -12.338  38.015  56.954  1.00 39.69
ATOM    659  CB  MET A  86     -11.921  40.829  57.337  1.00 29.51
ATOM    660  CG  MET A  86     -12.750  41.242  56.136  1.00 37.40
ATOM    661  SD  MET A  86     -11.816  41.878  54.701  1.00 47.84
ATOM    662  CE  MET A  86     -13.244  42.527  53.805  1.00 46.52
ATOM    663  N   GLU A  87     -14.441  38.324  57.610  1.00 44.34
ATOM    664  CA  GLU A  87     -14.912  37.107  56.950  1.00 47.21
ATOM    665  C   GLU A  87     -15.495  37.352  55.560  1.00 51.53
ATOM    666  O   GLU A  87     -16.425  38.129  55.424  1.00 53.92
ATOM    667  CB  GLU A  87     -15.942  36.390  57.813  1.00 49.46
ATOM    668  CG  GLU A  87     -16.144  34.937  57.389  1.00 56.39
ATOM    669  CD  GLU A  87     -17.300  34.316  58.104  1.00 80.78
ATOM    670  OE1 GLU A  87     -18.439  34.738  57.994  1.00 86.69
ATOM    671  OE2 GLU A  87     -16.943  33.301  58.868  1.00 68.69
ATOM    672  N   ILE A  88     -14.942  36.659  54.544  1.00 43.84
ATOM    673  CA  ILE A  88     -15.332  36.765  53.145  1.00 40.15
ATOM    674  C   ILE A  88     -16.145  35.610  52.613  1.00 46.72
ATOM    675  O   ILE A  88     -15.725  34.460  52.656  1.00 48.10
ATOM    676  CB  ILE A  88     -14.107  36.891  52.292  1.00 39.13
ATOM    677  CG1 ILE A  88     -13.328  38.146  52.696  1.00 38.40
ATOM    678  CG2 ILE A  88     -14.538  36.932  50.839  1.00 28.13
ATOM    679  CD1 ILE A  88     -11.944  38.200  52.051  1.00 30.07
ATOM    680  N   SER A  89     -17.314  35.931  52.077  1.00 45.16
ATOM    681  CA  SER A  89     -18.181  34.893  51.559  1.00 44.76
ATOM    682  C   SER A  89     -17.902  34.531  50.131  1.00 46.01
ATOM    683  O   SER A  89     -18.048  35.347  49.243  1.00 44.34
ATOM    684  CB  SER A  89     -19.657  35.121  51.827  1.00 51.87
ATOM    685  OG  SER A  89     -19.942  34.834  53.198  1.00 69.07
ATOM    686  N   LEU A  90     -17.494  33.279  49.914  1.00 46.43
ATOM    687  CA  LEU A  90     -17.204  32.804  48.575  1.00 46.93
ATOM    688  C   LEU A  90     -18.450  32.235  47.935  1.00 55.26
ATOM    689  O   LEU A  90     -19.210  31.476  48.556  1.00 54.94
ATOM    690  CB  LEU A  90     -16.080  31.750  48.521  1.00 46.14
ATOM    691  CG  LEU A  90     -15.262  31.607  49.792  1.00 50.78
ATOM    692  CD1 LEU A  90     -14.546  30.261  49.806  1.00 50.27
ATOM    693  CD2 LEU A  90     -14.219  32.708  49.863  1.00 55.52
ATOM    694  N   PRO A  91     -18.626  32.607  46.683  1.00 54.81
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ATOM    695  CA  PRO A  91     -19.756  32.183  45.870  1.00 58.45
ATOM    696  C   PRO A  91     -19.585  30.782  45.254  1.00 67.78
ATOM    697  O   PRO A  91     -20.500  30.250  44.623  1.00 68.64
ATOM    698  CB  PRO A  91     -19.843  33.213  44.738  1.00 59.70
ATOM    699  CG  PRO A  91     -18.503  33.952  44.711  1.00 61.25
ATOM    700  CD  PRO A  91     -17.731  33.539  45.961  1.00 54.16
ATOM    701  N   ILE A  92     -18.413  30.177  45.416  1.00 64.82
ATOM    702  CA  ILE A  92     -18.210  28.863  44.850  1.00 65.03
ATOM    703  C   ILE A  92     -17.485  27.948  45.801  1.00 66.34
ATOM    704  O   ILE A  92     -16.258  27.984  45.865  1.00 70.20
ATOM    705  CB  ILE A  92     -17.433  28.927  43.547  1.00 69.56
ATOM    706  CG1 ILE A  92     -18.298  29.495  42.430  1.00 70.02
ATOM    707  CG2 ILE A  92     -16.975  27.517  43.171  1.00 71.86
ATOM    708  CD1 ILE A  92     -17.528  29.672  41.121  1.00 80.63
ATOM    709  N   ALA A  93     -18.219  27.115  46.534  1.00 54.40
ATOM    710  CA  ALA A  93     -17.526  26.247  47.452  1.00 51.74
ATOM    711  C   ALA A  93     -16.265  25.750  46.804  1.00 52.66
ATOM    712  O   ALA A  93     -16.288  25.319  45.662  1.00 49.87
ATOM    713  CB  ALA A  93     -18.367  25.101  47.968  1.00 52.76
ATOM    714  N   LEU A  94     -15.162  25.861  47.544  1.00 48.18
ATOM    715  CA  LEU A  94     -13.862  25.425  47.067  1.00 43.27
ATOM    716  C   LEU A  94     -13.566  24.066  47.581  1.00 43.98
ATOM    717  O   LEU A  94     -14.086  23.633  48.601  1.00 44.63
ATOM    718  CB  LEU A  94     -12.713  26.344  47.509  1.00 41.05
ATOM    719  CG  LEU A  94     -12.685  27.638  46.739  1.00 40.03
ATOM    720  CD1 LEU A  94     -11.272  28.200  46.751  1.00 36.88
ATOM    721  CD2 LEU A  94     -13.115  27.343  45.311  1.00 44.98
ATOM    722  N   SER A  95     -12.706  23.406  46.875  1.00 43.26
ATOM    723  CA  SER A  95     -12.321  22.074  47.256  1.00 43.76
ATOM    724  C   SER A  95     -10.807  21.991  47.344  1.00 38.58
ATOM    725  O   SER A  95     -10.087  22.944  46.975  1.00 36.78
ATOM    726  CB  SER A  95     -12.902  21.092  46.256  1.00 51.55
ATOM    727  OG  SER A  95     -14.299  21.305  46.156  1.00 62.74
ATOM    728  N   LYS A  96     -10.321  20.863  47.830  1.00 31.10
ATOM    729  CA  LYS A  96      -8.883  20.723  47.958  1.00 34.92
ATOM    730  C   LYS A  96      -8.058  21.238  46.777  1.00 45.63
ATOM    731  O   LYS A  96      -8.400  21.063  45.612  1.00 49.35
ATOM    732  CB  LYS A  96      -8.401  19.366  48.451  1.00 38.53
ATOM    733  CG  LYS A  96      -9.189  18.871  49.651  1.00 68.97
ATOM    734  CD  LYS A  96      -8.691  17.549  50.221  1.00 80.86
ATOM    735  CE  LYS A  96      -9.596  17.011  51.330  1.00 92.53
ATOM    736  NZ  LYS A  96      -9.049  15.833  52.029  1.00100.00
ATOM    737  N   ASN A  97      -6.944  21.873  47.108  1.00 41.92
ATOM    738  CA  ASN A  97      -6.009  22.403  46.139  1.00 40.91
ATOM    739  C   ASN A  97      -6.606  23.348  45.088  1.00 42.64
ATOM    740  O   ASN A  97      -5.963  23.681  44.068  1.00 38.69
ATOM    741  CB  ASN A  97      -5.084  21.304  45.583  1.00 28.16
ATOM    742  CG  ASN A  97      -4.327  20.568  46.677  1.00 52.21
ATOM    743  OD1 ASN A  97      -3.089  20.627  46.744  1.00 55.30
ATOM    744  ND2 ASN A  97      -5.060  19.858  47.533  1.00 53.87
ATOM    745  N   GLN A  98      -7.833  23.791  45.382  1.00 36.59
ATOM    746  CA  GLN A  98      -8.557  24.718  44.536  1.00 38.44
ATOM    747  C   GLN A  98      -8.288  26.181  44.951  1.00 43.30
ATOM    748  O   GLN A  98      -8.248  26.526  46.138  1.00 43.40
ATOM    749  CB  GLN A  98     -10.064  24.395  44.575  1.00 42.26
ATOM    750  CG  GLN A  98     -10.553  23.538  43.385  1.00 68.24
ATOM    751  CD  GLN A  98     -12.008  23.778  43.010  1.00 95.57
ATOM    752  OE1 GLN A  98     -12.890  22.935  43.278  1.00 86.92
ATOM    753  NE2 GLN A  98     -12.271  24.935  42.393  1.00 95.48
ATOM    754  N   GLU A  99      -8.089  27.062  43.973  1.00 39.70
ATOM    755  CA  GLU A  99      -7.817  28.468  44.280  1.00 40.49
ATOM    756  C   GLU A  99      -8.750  29.536  43.683  1.00 47.84
ATOM    757  O   GLU A  99      -9.330  29.394  42.606  1.00 46.85
ATOM    758  CB  GLU A  99      -6.361  28.866  43.951  1.00 40.24
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ATOM    759  CG  GLU A  99      -5.608  27.861  43.080  1.00 44.16
ATOM    760  CD  GLU A  99      -4.120  28.119  42.990  1.00 65.64
ATOM    761  OE1 GLU A  99      -3.636  29.062  42.376  1.00 73.95
ATOM    762  OE2 GLU A  99      -3.395  27.210  43.614  1.00 55.99
ATOM    763  N   ILE A 100      -8.848  30.643  44.418  1.00 43.55
ATOM    764  CA  ILE A 100      -9.595  31.800  44.005  1.00 43.46
ATOM    765  C   ILE A 100      -8.701  32.992  44.238  1.00 53.31
ATOM    766  O   ILE A 100      -7.725  32.927  45.004  1.00 55.16
ATOM    767  CB  ILE A 100     -10.881  32.068  44.773  1.00 46.65
ATOM    768  CG1 ILE A 100     -10.762  31.640  46.227  1.00 50.76
ATOM    769  CG2 ILE A 100     -12.111  31.486  44.106  1.00 46.76
ATOM    770  CD1 ILE A 100      -9.959  32.620  47.087  1.00 64.36
ATOM    771  N   VAL A 101      -9.060  34.076  43.580  1.00 48.20
ATOM    772  CA  VAL A 101      -8.382  35.329  43.760  1.00 45.63
ATOM    773  C   VAL A 101      -9.383  36.351  44.295  1.00 48.59
ATOM    774  O   VAL A 101     -10.331  36.722  43.623  1.00 51.29
ATOM    775  CB  VAL A 101      -7.461  35.793  42.633  1.00 45.06
ATOM    776  CG1 VAL A 101      -7.693  35.000  41.378  1.00 43.25
ATOM    777  CG2 VAL A 101      -7.609  37.289  42.395  1.00 45.02
ATOM    778  N   ILE A 102      -9.182  36.738  45.546  1.00 41.15
ATOM    779  CA  ILE A 102     -10.023  37.690  46.238  1.00 39.43
ATOM    780  C   ILE A 102      -9.439  39.062  46.170  1.00 49.35
ATOM    781  O   ILE A 102      -8.331  39.274  46.659  1.00 53.80
ATOM    782  CB  ILE A 102     -10.097  37.319  47.694  1.00 39.19
ATOM    783  CG1 ILE A 102     -10.180  35.800  47.809  1.00 35.28
ATOM    784  CG2 ILE A 102     -11.300  37.992  48.341  1.00 35.25
ATOM    785  CD1 ILE A 102     -10.962  35.392  49.044  1.00 47.09
ATOM    786  N   GLU A 103     -10.192  39.984  45.572  1.00 43.20
ATOM    787  CA  GLU A 103      -9.748  41.362  45.433  1.00 39.88
ATOM    788  C   GLU A 103     -10.378  42.299  46.425  1.00 44.03
ATOM    789  O   GLU A 103     -11.580  42.558  46.385  1.00 41.34
ATOM    790  CB  GLU A 103      -9.950  41.930  44.047  1.00 39.11
ATOM    791  CG  GLU A 103      -9.017  43.112  43.863  1.00 36.18
ATOM    792  CD  GLU A 103      -9.150  43.666  42.485  1.00 61.93
ATOM    793  OE1 GLU A 103     -10.157  44.234  42.100  1.00 69.89
ATOM    794  OE2 GLU A 103      -8.087  43.457  41.744  1.00 76.18
ATOM    795  N   ILE A 104      -9.534  42.797  47.322  1.00 42.69
ATOM    796  CA  ILE A 104      -9.969  43.718  48.346  1.00 40.72
ATOM    797  C   ILE A 104      -9.522  45.167  48.099  1.00 46.21
ATOM    798  O   ILE A 104      -8.346  45.478  47.866  1.00 42.68
ATOM    799  CB  ILE A 104      -9.578  43.283  49.754  1.00 41.75
ATOM    800  CG1 ILE A 104     -10.006  41.855  50.032  1.00 39.85
ATOM    801  CG2 ILE A 104     -10.225  44.222  50.768  1.00 41.53
ATOM    802  CD1 ILE A 104      -8.839  40.995  50.485  1.00 34.17
ATOM    803  N   SER A 105     -10.506  46.056  48.173  1.00 47.94
ATOM    804  CA  SER A 105     -10.278  47.481  48.046  1.00 48.05
ATOM    805  C   SER A 105     -10.184  47.977  49.482  1.00 42.39
ATOM    806  O   SER A 105     -11.134  47.879  50.263  1.00 39.69
ATOM    807  CB  SER A 105     -11.399  48.180  47.290  1.00 53.77
ATOM    808  OG  SER A 105     -11.399  47.789  45.930  1.00 60.69
ATOM    809  N   PHE A 106      -9.020  48.445  49.857  1.00 35.07
ATOM    810  CA  PHE A 106      -8.844  48.890  51.223  1.00 34.98
ATOM    811  C   PHE A 106      -8.177  50.238  51.262  1.00 39.26
ATOM    812  O   PHE A 106      -7.607  50.730  50.265  1.00 34.24
ATOM    813  CB  PHE A 106      -8.015  47.864  52.060  1.00 36.05
ATOM    814  CG  PHE A 106      -6.581  47.815  51.556  1.00 37.24
ATOM    815  CD1 PHE A 106      -6.251  47.073  50.422  1.00 39.71
ATOM    816  CD2 PHE A 106      -5.579  48.579  52.161  1.00 36.44
ATOM    817  CE1 PHE A 106      -4.950  47.086  49.920  1.00 41.48
ATOM    818  CE2 PHE A 106      -4.273  48.609  51.672  1.00 38.19
ATOM    819  CZ  PHE A 106      -3.961  47.856  50.540  1.00 37.91
ATOM    820  N   GLU A 107      -8.284  50.794  52.453  1.00 40.64
ATOM    821  CA  GLU A 107      -7.711  52.064  52.848  1.00 43.81
ATOM    822  C   GLU A 107      -7.206  51.869  54.284  1.00 43.82
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ATOM    823  O   GLU A 107      -7.933  51.303  55.121  1.00 38.38
ATOM    824  CB  GLU A 107      -8.737  53.234  52.753  1.00 46.93
ATOM    825  CG  GLU A 107      -8.107  54.637  52.467  1.00 67.21
ATOM    826  CD  GLU A 107      -9.086  55.715  52.042  1.00100.00
ATOM    827  OE1 GLU A 107     -10.208  55.504  51.599  1.00100.00
ATOM    828  OE2 GLU A 107      -8.631  56.938  52.221  1.00 93.72
ATOM    829  N   THR A 108      -5.963  52.294  54.551  1.00 39.12
ATOM    830  CA  THR A 108      -5.345  52.175  55.873  1.00 39.69
ATOM    831  C   THR A 108      -5.564  53.427  56.724  1.00 49.82
ATOM    832  O   THR A 108      -5.565  54.552  56.177  1.00 50.94
ATOM    833  CB  THR A 108      -3.810  52.095  55.722  1.00 40.40
ATOM    834  OG1 THR A 108      -3.360  53.226  54.981  1.00 32.22
ATOM    835  CG2 THR A 108      -3.371  50.802  55.042  1.00 46.43
ATOM    836  N   SER A 109      -5.698  53.217  58.065  1.00 42.02
ATOM    837  CA  SER A 109      -5.848  54.294  59.038  1.00 38.13
ATOM    838  C   SER A 109      -4.555  55.101  59.082  1.00 38.47
ATOM    839  O   SER A 109      -3.460  54.583  58.921  1.00 33.60
ATOM    840  CB  SER A 109      -6.166  53.759  60.437  1.00 41.44
ATOM    841  OG  SER A 109      -6.205  54.812  61.404  1.00 47.63
ATOM    842  N   PRO A 110      -4.655  56.392  59.308  1.00 41.64
ATOM    843  CA  PRO A 110      -3.419  57.116  59.393  1.00 40.75
ATOM    844  C   PRO A 110      -2.803  56.749  60.725  1.00 41.47
ATOM    845  O   PRO A 110      -1.676  57.080  61.009  1.00 42.30
ATOM    846  CB  PRO A 110      -3.721  58.605  59.298  1.00 42.09
ATOM    847  CG  PRO A 110      -5.224  58.719  59.132  1.00 48.77
ATOM    848  CD  PRO A 110      -5.811  57.318  59.269  1.00 44.58
ATOM    849  N   LYS A 111      -3.578  56.017  61.518  1.00 36.35
ATOM    850  CA  LYS A 111      -3.167  55.535  62.819  1.00 36.74
ATOM    851  C   LYS A 111      -2.669  54.083  62.720  1.00 40.19
ATOM    852  O   LYS A 111      -2.733  53.319  63.678  1.00 40.53
ATOM    853  CB  LYS A 111      -4.341  55.606  63.807  1.00 41.91
ATOM    854  CG  LYS A 111      -4.362  56.838  64.708  1.00 71.21
ATOM    855  CD  LYS A 111      -5.421  57.854  64.309  1.00 97.95
ATOM    856  CE  LYS A 111      -6.839  57.394  64.611  1.00100.00
ATOM    857  NZ  LYS A 111      -7.853  58.120  63.819  1.00100.00
ATOM    858  N   SER A 112      -2.184  53.670  61.550  1.00 36.84
ATOM    859  CA  SER A 112      -1.714  52.296  61.358  1.00 34.35
ATOM    860  C   SER A 112      -0.518  51.917  62.225  1.00 35.57
ATOM    861  O   SER A 112       0.533  52.548  62.166  1.00 32.49
ATOM    862  CB  SER A 112      -1.449  51.995  59.883  1.00 35.16
ATOM    863  OG  SER A 112      -0.682  50.814  59.762  1.00 31.94
ATOM    864  N   SER A 113      -0.666  50.872  63.033  1.00 31.84
ATOM    865  CA  SER A 113       0.445  50.460  63.866  1.00 29.27
ATOM    866  C   SER A 113       1.601  49.927  63.040  1.00 33.37
ATOM    867  O   SER A 113       2.715  49.792  63.497  1.00 32.95
ATOM    868  CB  SER A 113       0.052  49.498  64.945  1.00 29.45
ATOM    869  OG  SER A 113       0.045  48.169  64.462  1.00 34.27
ATOM    870  N   ALA A 114       1.357  49.628  61.797  1.00 33.69
ATOM    871  CA  ALA A 114       2.437  49.134  60.981  1.00 34.05
ATOM    872  C   ALA A 114       3.239  50.287  60.388  1.00 37.83
ATOM    873  O   ALA A 114       4.411  50.149  60.033  1.00 37.72
ATOM    874  CB  ALA A 114       1.845  48.292  59.852  1.00 34.51
ATOM    875  N   LEU A 115       2.580  51.432  60.259  1.00 32.19
ATOM    876  CA  LEU A 115       3.201  52.595  59.662  1.00 30.48
ATOM    877  C   LEU A 115       3.509  53.745  60.565  1.00 35.32
ATOM    878  O   LEU A 115       2.902  54.012  61.604  1.00 35.25
ATOM    879  CB  LEU A 115       2.358  53.156  58.507  1.00 30.53
ATOM    880  CG  LEU A 115       1.787  52.064  57.602  1.00 35.51
ATOM    881  CD1 LEU A 115       0.812  52.710  56.637  1.00 35.12
ATOM    882  CD2 LEU A 115       2.903  51.387  56.821  1.00 33.88
ATOM    883  N   GLN A 116       4.490  54.457  60.096  1.00 34.00
ATOM    884  CA  GLN A 116       4.926  55.656  60.737  1.00 32.52
ATOM    885  C   GLN A 116       5.066  56.689  59.645  1.00 31.34
ATOM    886  O   GLN A 116       5.880  56.552  58.729  1.00 28.29
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ATOM    887  CB  GLN A 116       6.232  55.540  61.496  1.00 32.66
ATOM    888  CG  GLN A 116       6.419  56.813  62.322  1.00 41.25
ATOM    889  CD  GLN A 116       7.777  56.897  62.952  1.00 50.08
ATOM    890  OE1 GLN A 116       8.515  55.905  63.017  1.00 55.36
ATOM    891  NE2 GLN A 116       8.090  58.081  63.438  1.00 38.23
ATOM    892  N   TRP A 117       4.210  57.680  59.748  1.00 26.66
ATOM    893  CA  TRP A 117       4.148  58.785  58.827  1.00 26.04
ATOM    894  C   TRP A 117       4.912  59.978  59.375  1.00 34.56
ATOM    895  O   TRP A 117       4.467  60.589  60.364  1.00 36.83
ATOM    896  CB  TRP A 117       2.669  59.188  58.630  1.00 23.15
ATOM    897  CG  TRP A 117       1.826  58.209  57.863  1.00 23.02
ATOM    898  CD1 TRP A 117       1.052  57.224  58.397  1.00 26.39
ATOM    899  CD2 TRP A 117       1.640  58.135  56.433  1.00 21.06
ATOM    900  NE1 TRP A 117       0.395  56.534  57.393  1.00 26.40
ATOM    901  CE2 TRP A 117       0.735  57.087  56.184  1.00 27.99
ATOM    902  CE3 TRP A 117       2.121  58.872  55.361  1.00 20.95
ATOM    903  CZ2 TRP A 117       0.352  56.753  54.886  1.00 28.21
ATOM    904  CZ3 TRP A 117       1.750  58.560  54.079  1.00 22.43
ATOM    905  CH2 TRP A 117       0.872  57.512  53.847  1.00 24.28
ATOM    906  N   LEU A 118       6.043  60.340  58.756  1.00 31.44
ATOM    907  CA  LEU A 118       6.745  61.506  59.276  1.00 36.67
ATOM    908  C   LEU A 118       6.584  62.774  58.432  1.00 46.93
ATOM    909  O   LEU A 118       6.434  62.705  57.210  1.00 51.17
ATOM    910  CB  LEU A 118       8.250  61.327  59.577  1.00 38.83
ATOM    911  CG  LEU A 118       8.881  59.939  59.398  1.00 44.33
ATOM    912  CD1 LEU A 118      10.392  60.065  59.569  1.00 42.12
ATOM    913  CD2 LEU A 118       8.351  58.950  60.426  1.00 49.99
ATOM    914  N   THR A 119       6.524  63.939  59.109  1.00 41.34
ATOM    915  CA  THR A 119       6.449  65.260  58.468  1.00 38.89
ATOM    916  C   THR A 119       7.847  65.633  58.034  1.00 40.14
ATOM    917  O   THR A 119       8.841  65.165  58.605  1.00 44.03
ATOM    918  CB  THR A 119       5.932  66.300  59.467  1.00 42.63
ATOM    919  OG1 THR A 119       6.994  66.605  60.362  1.00 50.01
ATOM    920  CG2 THR A 119       4.769  65.668  60.224  1.00 36.78
ATOM    921  N   PRO A 120       7.963  66.440  57.020  1.00 33.41
ATOM    922  CA  PRO A 120       9.275  66.781  56.517  1.00 33.18
ATOM    923  C   PRO A 120      10.260  67.209  57.599  1.00 38.27
ATOM    924  O   PRO A 120      11.433  66.829  57.566  1.00 34.42
ATOM    925  CB  PRO A 120       9.068  67.840  55.416  1.00 33.54
ATOM    926  CG  PRO A 120       7.582  67.823  55.097  1.00 34.86
ATOM    927  CD  PRO A 120       6.891  67.180  56.300  1.00 30.86
ATOM    928  N   GLU A 121       9.751  67.982  58.563  1.00 38.03
ATOM    929  CA  GLU A 121      10.534  68.474  59.681  1.00 41.03
ATOM    930  C   GLU A 121      11.212  67.361  60.411  1.00 50.88
ATOM    931  O   GLU A 121      12.279  67.548  60.977  1.00 54.97
ATOM    932  CB  GLU A 121       9.742  69.325  60.699  1.00 43.28
ATOM    933  CG  GLU A 121       8.220  69.071  60.702  1.00 64.72
ATOM    934  CD  GLU A 121       7.398  70.118  59.988  1.00 86.07
ATOM    935  OE1 GLU A 121       7.007  71.131  60.538  1.00100.00
ATOM    936  OE2 GLU A 121       7.108  69.803  58.739  1.00 59.72
ATOM    937  N   GLN A 122      10.569  66.202  60.394  1.00 44.09
ATOM    938  CA  GLN A 122      11.083  65.019  61.041  1.00 40.20
ATOM    939  C   GLN A 122      12.170  64.373  60.232  1.00 47.73
ATOM    940  O   GLN A 122      12.711  63.343  60.643  1.00 53.29
ATOM    941  CB  GLN A 122       9.965  63.992  61.224  1.00 39.31
ATOM    942  CG  GLN A 122       9.057  64.441  62.361  1.00 30.23
ATOM    943  CD  GLN A 122       7.756  63.691  62.438  1.00 38.25
ATOM    944  OE1 GLN A 122       6.899  63.804  61.548  1.00 53.34
ATOM    945  NE2 GLN A 122       7.592  62.938  63.521  1.00 18.98
ATOM    946  N   THR A 123      12.486  64.942  59.074  1.00 38.99
ATOM    947  CA  THR A 123      13.490  64.319  58.229  1.00 36.00
ATOM    948  C   THR A 123      14.755  65.034  58.264  1.00 35.30
ATOM    949  O   THR A 123      14.842  66.074  58.875  1.00 34.95
ATOM    950  CB  THR A 123      13.067  64.145  56.759  1.00 38.25
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ATOM    951  OG1 THR A 123      13.144  65.374  56.046  1.00 43.75
ATOM    952  CG2 THR A 123      11.643  63.616  56.725  1.00 40.72
ATOM    953  N   SER A 124      15.699  64.447  57.557  1.00 32.18
ATOM    954  CA  SER A 124      17.025  64.996  57.442  1.00 33.71
ATOM    955  C   SER A 124      17.007  66.216  56.553  1.00 39.04
ATOM    956  O   SER A 124      17.537  67.268  56.883  1.00 39.07
ATOM    957  CB  SER A 124      18.023  63.992  56.859  1.00 37.73
ATOM    958  OG  SER A 124      18.359  62.978  57.796  1.00 36.28
ATOM    959  N   GLY A 125      16.389  66.025  55.414  1.00 38.59
ATOM    960  CA  GLY A 125      16.280  67.034  54.396  1.00 39.90
ATOM    961  C   GLY A 125      15.290  68.094  54.749  1.00 46.83
ATOM    962  O   GLY A 125      15.347  69.171  54.172  1.00 49.78
ATOM    963  N   LYS A 126      14.391  67.788  55.678  1.00 41.09
ATOM    964  CA  LYS A 126      13.396  68.761  56.126  1.00 41.26
ATOM    965  C   LYS A 126      12.498  69.307  55.020  1.00 47.42
ATOM    966  O   LYS A 126      11.617  70.141  55.279  1.00 48.94
ATOM    967  CB  LYS A 126      14.024  69.936  56.894  1.00 41.98
ATOM    968  CG  LYS A 126      15.094  69.555  57.913  1.00 45.84
ATOM    969  CD  LYS A 126      14.535  68.838  59.135  1.00 58.74
ATOM    970  CE  LYS A 126      15.612  68.500  60.151  1.00 72.12
ATOM    971  NZ  LYS A 126      15.395  67.218  60.839  1.00 88.38
ATOM    972  N   GLU A 127      12.722  68.858  53.792  1.00 41.82
ATOM    973  CA  GLU A 127      11.921  69.344  52.708  1.00 41.98
ATOM    974  C   GLU A 127      10.899  68.334  52.239  1.00 45.14
ATOM    975  O   GLU A 127       9.994  68.683  51.496  1.00 46.95
ATOM    976  CB  GLU A 127      12.727  70.015  51.543  1.00 44.39
ATOM    977  CG  GLU A 127      13.198  71.499  51.820  1.00 57.99
ATOM    978  CD  GLU A 127      12.331  72.659  51.301  1.00100.00
ATOM    979  OE1 GLU A 127      11.652  72.611  50.286  1.00100.00
ATOM    980  OE2 GLU A 127      12.387  73.758  52.054  1.00100.00
ATOM    981  N   HIS A 128      11.027  67.077  52.653  1.00 39.18
ATOM    982  CA  HIS A 128      10.068  66.072  52.210  1.00 39.43
ATOM    983  C   HIS A 128       9.636  65.148  53.316  1.00 42.09
ATOM    984  O   HIS A 128      10.366  64.955  54.281  1.00 45.34
ATOM    985  CB  HIS A 128      10.628  65.194  51.097  1.00 42.16
ATOM    986  CG  HIS A 128      10.947  65.936  49.854  1.00 47.24
ATOM    987  ND1 HIS A 128       9.943  66.423  49.029  1.00 49.12
ATOM    988  CD2 HIS A 128      12.159  66.262  49.322  1.00 51.13
ATOM    989  CE1 HIS A 128      10.559  67.031  48.026  1.00 49.97
ATOM    990  NE2 HIS A 128      11.888  66.953  48.166  1.00 50.87
ATOM    991  N   PRO A 129       8.447  64.572  53.171  1.00 32.55
ATOM    992  CA  PRO A 129       7.968  63.650  54.163  1.00 31.15
ATOM    993  C   PRO A 129       8.636  62.328  53.900  1.00 34.90
ATOM    994  O   PRO A 129       9.481  62.214  53.021  1.00 35.46
ATOM    995  CB  PRO A 129       6.466  63.490  53.986  1.00 31.94
ATOM    996  CG  PRO A 129       6.133  64.104  52.649  1.00 36.83
ATOM    997  CD  PRO A 129       7.384  64.850  52.185  1.00 32.71
ATOM    998  N   TYR A 130       8.248  61.342  54.659  1.00 29.47
ATOM    999  CA  TYR A 130       8.826  60.025  54.548  1.00 29.35
ATOM   1000  C   TYR A 130       7.856  59.046  55.156  1.00 31.83
ATOM   1001  O   TYR A 130       7.138  59.375  56.093  1.00 29.84
ATOM   1002  CB  TYR A 130      10.098  60.029  55.433  1.00 30.54
ATOM   1003  CG  TYR A 130      11.083  58.886  55.285  1.00 29.76
ATOM   1004  CD1 TYR A 130      10.845  57.630  55.845  1.00 26.16
ATOM   1005  CD2 TYR A 130      12.290  59.110  54.619  1.00 30.28
ATOM   1006  CE1 TYR A 130      11.795  56.621  55.721  1.00 17.87
ATOM   1007  CE2 TYR A 130      13.253  58.114  54.479  1.00 27.75
ATOM   1008  CZ  TYR A 130      12.983  56.866  55.031  1.00 25.76
ATOM   1009  OH  TYR A 130      13.899  55.864  54.894  1.00 40.52
ATOM   1010  N   LEU A 131       7.832  57.842  54.647  1.00 31.12
ATOM   1011  CA  LEU A 131       6.994  56.868  55.303  1.00 30.43
ATOM   1012  C   LEU A 131       7.691  55.568  55.289  1.00 33.91
ATOM   1013  O   LEU A 131       8.398  55.257  54.397  1.00 33.68
ATOM   1014  CB  LEU A 131       5.679  56.761  54.530  1.00 26.16
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ATOM   1015  CG  LEU A 131       5.065  55.367  54.600  1.00 21.68
ATOM   1016  CD1 LEU A 131       4.163  55.206  55.797  1.00 17.56
ATOM   1017  CD2 LEU A 131       4.222  55.008  53.380  1.00 13.86
ATOM   1018  N   PHE A 132       7.533  54.828  56.348  1.00 29.24
ATOM   1019  CA  PHE A 132       8.129  53.527  56.323  1.00 33.44
ATOM   1020  C   PHE A 132       7.299  52.519  57.157  1.00 41.08
ATOM   1021  O   PHE A 132       6.344  52.889  57.837  1.00 46.05
ATOM   1022  CB  PHE A 132       9.621  53.670  56.791  1.00 36.40
ATOM   1023  CG  PHE A 132       9.763  53.895  58.256  1.00 38.11
ATOM   1024  CD1 PHE A 132       9.601  52.821  59.053  1.00 37.18
ATOM   1025  CD2 PHE A 132      10.123  55.158  58.803  1.00 43.89
ATOM   1026  CE1 PHE A 132       9.771  52.936  60.422  1.00 41.04
ATOM   1027  CE2 PHE A 132      10.289  55.258  60.174  1.00 47.72
ATOM   1028  CZ  PHE A 132      10.131  54.143  60.986  1.00 44.34
ATOM   1029  N   SER A 133       7.612  51.221  57.002  1.00 33.47
ATOM   1030  CA  SER A 133       6.744  50.228  57.629  1.00 29.86
ATOM   1031  C   SER A 133       7.499  49.221  58.504  1.00 31.53
ATOM   1032  O   SER A 133       8.724  49.146  58.531  1.00 33.16
ATOM   1033  CB  SER A 133       5.942  49.481  56.535  1.00 33.19
ATOM   1034  OG  SER A 133       6.757  48.480  55.926  1.00 50.66
ATOM   1035  N   GLN A 134       6.703  48.466  59.294  1.00 24.61
ATOM   1036  CA  GLN A 134       7.283  47.422  60.134  1.00 22.55
ATOM   1037  C   GLN A 134       6.268  46.321  60.398  1.00 27.28
ATOM   1038  O   GLN A 134       5.161  46.566  60.809  1.00 25.09
ATOM   1039  CB  GLN A 134       7.711  48.041  61.464  1.00 23.29
ATOM   1040  CG  GLN A 134       8.218  46.987  62.454  1.00 25.96
ATOM   1041  CD  GLN A 134       9.423  46.290  61.872  1.00 25.65
ATOM   1042  OE1 GLN A 134      10.296  46.876  61.263  1.00 26.36
ATOM   1043  NE2 GLN A 134       9.445  44.965  62.095  1.00 21.75
ATOM   1044  N   CYS A 135       6.435  45.124  59.820  1.00 29.60
ATOM   1045  CA  CYS A 135       5.291  44.220  59.755  1.00 32.30
ATOM   1046  C   CYS A 135       5.442  43.006  60.662  1.00 39.58
ATOM   1047  O   CYS A 135       4.597  42.144  60.739  1.00 40.94
ATOM   1048  CB  CYS A 135       5.098  43.794  58.320  1.00 35.40
ATOM   1049  SG  CYS A 135       3.976  44.922  57.445  1.00 41.22
ATOM   1050  N   GLN A 136       6.582  42.949  61.345  1.00 37.37
ATOM   1051  CA  GLN A 136       6.715  41.982  62.417  1.00 35.71
ATOM   1052  C   GLN A 136       6.589  42.645  63.797  1.00 31.90
ATOM   1053  O   GLN A 136       6.878  43.803  63.981  1.00 30.54
ATOM   1054  CB  GLN A 136       8.077  41.311  62.295  1.00 37.24
ATOM   1055  CG  GLN A 136       8.076  39.878  62.847  1.00 29.70
ATOM   1056  CD  GLN A 136       9.483  39.511  63.235  1.00 36.48
ATOM   1057  OE1 GLN A 136      10.366  40.328  63.356  1.00 24.49
ATOM   1058  NE2 GLN A 136       9.665  38.201  63.443  1.00 22.19
ATOM   1059  N   ALA A 137       5.850  41.899  64.648  1.00 28.56
ATOM   1060  CA  ALA A 137       5.235  40.581  64.351  1.00 28.89
ATOM   1061  C   ALA A 137       3.860  40.503  63.630  1.00 31.83
ATOM   1062  O   ALA A 137       3.679  39.688  62.738  1.00 29.67
ATOM   1063  CB  ALA A 137       5.091  39.742  65.625  1.00 28.91
ATOM   1064  N   ILE A 138       2.863  41.285  64.070  1.00 27.07
ATOM   1065  CA  ILE A 138       1.553  41.176  63.445  1.00 23.90
ATOM   1066  C   ILE A 138       0.960  42.492  63.053  1.00 28.69
ATOM   1067  O   ILE A 138      -0.144  42.822  63.426  1.00 31.92
ATOM   1068  CB  ILE A 138       0.641  40.357  64.339  1.00 25.41
ATOM   1069  CG1 ILE A 138       0.871  40.811  65.801  1.00 27.32
ATOM   1070  CG2 ILE A 138       1.162  38.938  64.191  1.00 16.34
ATOM   1071  CD1 ILE A 138      -0.275  40.615  66.826  1.00 20.22
ATOM   1072  N   HIS A 139       1.718  43.223  62.265  1.00 24.05
ATOM   1073  CA  HIS A 139       1.322  44.511  61.824  1.00 24.05
ATOM   1074  C   HIS A 139       0.982  44.579  60.351  1.00 34.40
ATOM   1075  O   HIS A 139       0.539  45.625  59.888  1.00 35.89
ATOM   1076  CB  HIS A 139       2.439  45.519  62.173  1.00 24.63
ATOM   1077  CG  HIS A 139       2.689  45.619  63.657  1.00 27.97
ATOM   1078  ND1 HIS A 139       1.679  45.970  64.571  1.00 27.75
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ATOM   1079  CD2 HIS A 139       3.835  45.437  64.356  1.00 28.42
ATOM   1080  CE1 HIS A 139       2.222  45.983  65.770  1.00 26.19
ATOM   1081  NE2 HIS A 139       3.517  45.668  65.671  1.00 27.42
ATOM   1082  N   CYS A 140       1.181  43.490  59.598  1.00 30.28
ATOM   1083  CA  CYS A 140       0.832  43.517  58.181  1.00 28.08
ATOM   1084  C   CYS A 140      -0.671  43.765  58.011  1.00 28.98
ATOM   1085  O   CYS A 140      -1.111  44.449  57.066  1.00 30.00
ATOM   1086  CB  CYS A 140       1.181  42.213  57.447  1.00 28.82
ATOM   1087  SG  CYS A 140       1.330  42.483  55.661  1.00 34.37
ATOM   1088  N   ARG A 141      -1.440  43.168  58.949  1.00 20.78
ATOM   1089  CA  ARG A 141      -2.884  43.252  58.996  1.00 20.33
ATOM   1090  C   ARG A 141      -3.286  44.684  59.003  1.00 32.37
ATOM   1091  O   ARG A 141      -4.355  45.032  58.510  1.00 35.81
ATOM   1092  CB  ARG A 141      -3.557  42.498  60.156  1.00 14.60
ATOM   1093  CG  ARG A 141      -3.081  42.891  61.568  1.00 20.94
ATOM   1094  CD  ARG A 141      -3.576  41.978  62.715  1.00 19.99
ATOM   1095  NE  ARG A 141      -2.911  40.690  62.786  1.00 18.24
ATOM   1096  CZ  ARG A 141      -3.140  39.707  63.648  1.00 18.77
ATOM   1097  NH1 ARG A 141      -4.029  39.739  64.634  1.00 20.76
ATOM   1098  NH2 ARG A 141      -2.415  38.640  63.508  1.00 24.20
ATOM   1099  N   ALA A 142      -2.408  45.511  59.580  1.00 28.35
ATOM   1100  CA  ALA A 142      -2.668  46.940  59.657  1.00 27.60
ATOM   1101  C   ALA A 142      -2.369  47.652  58.345  1.00 34.33
ATOM   1102  O   ALA A 142      -2.620  48.835  58.203  1.00 34.36
ATOM   1103  CB  ALA A 142      -1.994  47.616  60.843  1.00 27.67
ATOM   1104  N   ILE A 143      -1.824  46.922  57.382  1.00 32.39
ATOM   1105  CA  ILE A 143      -1.537  47.499  56.099  1.00 30.38
ATOM   1106  C   ILE A 143      -2.520  46.994  55.067  1.00 37.79
ATOM   1107  O   ILE A 143      -2.885  47.709  54.152  1.00 42.65
ATOM   1108  CB  ILE A 143      -0.142  47.228  55.613  1.00 32.06
ATOM   1109  CG1 ILE A 143       0.827  48.062  56.414  1.00 31.71
ATOM   1110  CG2 ILE A 143      -0.074  47.654  54.143  1.00 34.02
ATOM   1111  CD1 ILE A 143       2.258  47.774  55.988  1.00 42.10
ATOM   1112  N   LEU A 144      -2.939  45.749  55.218  1.00 32.50
ATOM   1113  CA  LEU A 144      -3.873  45.142  54.291  1.00 32.36
ATOM   1114  C   LEU A 144      -4.435  43.838  54.849  1.00 40.36
ATOM   1115  O   LEU A 144      -3.959  43.278  55.852  1.00 33.27
ATOM   1116  CB  LEU A 144      -3.250  44.936  52.894  1.00 31.58
ATOM   1117  CG  LEU A 144      -1.923  44.170  52.917  1.00 33.31
ATOM   1118  CD1 LEU A 144      -2.147  42.770  52.352  1.00 32.07
ATOM   1119  CD2 LEU A 144      -0.836  44.897  52.110  1.00 28.67
ATOM   1120  N   PRO A 145      -5.490  43.347  54.213  1.00 40.02
ATOM   1121  CA  PRO A 145      -6.080  42.129  54.715  1.00 37.86
ATOM   1122  C   PRO A 145      -5.264  40.941  54.286  1.00 37.87
ATOM   1123  O   PRO A 145      -4.819  40.831  53.144  1.00 35.27
ATOM   1124  CB  PRO A 145      -7.530  42.080  54.220  1.00 38.81
ATOM   1125  CG  PRO A 145      -7.778  43.393  53.492  1.00 41.34
ATOM   1126  CD  PRO A 145      -6.432  44.093  53.341  1.00 36.69
ATOM   1127  N   CYS A 146      -5.041  40.056  55.233  1.00 36.18
ATOM   1128  CA  CYS A 146      -4.250  38.882  54.958  1.00 35.60
ATOM   1129  C   CYS A 146      -4.358  37.859  56.069  1.00 33.04
ATOM   1130  O   CYS A 146      -5.067  38.062  57.050  1.00 30.78
ATOM   1131  CB  CYS A 146      -2.761  39.287  54.813  1.00 36.08
ATOM   1132  SG  CYS A 146      -2.087  40.108  56.302  1.00 39.43
ATOM   1133  N   GLN A 147      -3.637  36.755  55.883  1.00 29.33
ATOM   1134  CA  GLN A 147      -3.517  35.703  56.875  1.00 29.71
ATOM   1135  C   GLN A 147      -2.254  36.131  57.628  1.00 38.75
ATOM   1136  O   GLN A 147      -1.141  35.926  57.135  1.00 40.79
ATOM   1137  CB  GLN A 147      -3.322  34.352  56.206  1.00 28.99
ATOM   1138  CG  GLN A 147      -4.672  33.707  55.894  1.00 25.73
ATOM   1139  CD  GLN A 147      -4.562  32.532  54.960  1.00 39.92
ATOM   1140  OE1 GLN A 147      -4.217  32.668  53.775  1.00 43.89
ATOM   1141  NE2 GLN A 147      -4.828  31.368  55.499  1.00 26.36
ATOM   1142  N   ASP A 148      -2.425  36.834  58.765  1.00 32.68
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ATOM   1143  CA  ASP A 148      -1.287  37.362  59.474  1.00 33.50
ATOM   1144  C   ASP A 148      -0.629  36.377  60.371  1.00 33.13
ATOM   1145  O   ASP A 148      -0.622  36.563  61.584  1.00 31.30
ATOM   1146  CB  ASP A 148      -1.633  38.642  60.253  1.00 37.78
ATOM   1147  CG  ASP A 148      -0.535  39.666  60.332  1.00 45.10
ATOM   1148  OD1 ASP A 148       0.564  39.540  59.836  1.00 47.89
ATOM   1149  OD2 ASP A 148      -0.913  40.737  60.952  1.00 48.63
ATOM   1150  N   THR A 149      -0.080  35.345  59.742  1.00 29.15
ATOM   1151  CA  THR A 149       0.584  34.251  60.422  1.00 28.25
ATOM   1152  C   THR A 149       1.805  33.831  59.625  1.00 34.92
ATOM   1153  O   THR A 149       1.757  33.764  58.410  1.00 34.47
ATOM   1154  CB  THR A 149      -0.403  33.087  60.674  1.00 24.79
ATOM   1155  OG1 THR A 149       0.241  32.059  61.352  1.00 37.15
ATOM   1156  CG2 THR A 149      -0.905  32.527  59.345  1.00 26.56
ATOM   1157  N   PRO A 150       2.910  33.575  60.323  1.00 34.69
ATOM   1158  CA  PRO A 150       4.142  33.217  59.659  1.00 31.06
ATOM   1159  C   PRO A 150       4.087  31.813  59.131  1.00 36.66
ATOM   1160  O   PRO A 150       4.995  31.356  58.450  1.00 36.37
ATOM   1161  CB  PRO A 150       5.245  33.327  60.712  1.00 31.18
ATOM   1162  CG  PRO A 150       4.570  33.471  62.077  1.00 36.95
ATOM   1163  CD  PRO A 150       3.078  33.589  61.823  1.00 34.62
ATOM   1164  N   SER A 151       2.992  31.150  59.452  1.00 31.62
ATOM   1165  CA  SER A 151       2.778  29.791  59.029  1.00 27.35
ATOM   1166  C   SER A 151       2.357  29.738  57.564  1.00 32.97
ATOM   1167  O   SER A 151       2.344  28.703  56.928  1.00 34.25
ATOM   1168  CB  SER A 151       1.714  29.203  59.905  1.00 25.95
ATOM   1169  OG  SER A 151       0.483  29.685  59.439  1.00 49.35
ATOM   1170  N   VAL A 152       1.997  30.887  57.024  1.00 34.36
ATOM   1171  CA  VAL A 152       1.595  31.015  55.623  1.00 33.74
ATOM   1172  C   VAL A 152       2.705  31.764  54.847  1.00 37.45
ATOM   1173  O   VAL A 152       3.295  32.761  55.313  1.00 37.63
ATOM   1174  CB  VAL A 152       0.203  31.697  55.427  1.00 32.61
ATOM   1175  CG1 VAL A 152      -0.184  31.767  53.963  1.00 31.50
ATOM   1176  CG2 VAL A 152      -0.915  30.975  56.149  1.00 31.29
ATOM   1177  N   LYS A 153       2.999  31.289  53.654  1.00 26.98
ATOM   1178  CA  LYS A 153       4.002  31.927  52.866  1.00 25.81
ATOM   1179  C   LYS A 153       3.469  32.141  51.473  1.00 33.94
ATOM   1180  O   LYS A 153       2.826  31.251  50.936  1.00 32.91
ATOM   1181  CB  LYS A 153       5.252  31.091  52.841  1.00 24.70
ATOM   1182  CG  LYS A 153       6.383  31.760  53.583  1.00 34.68
ATOM   1183  CD  LYS A 153       7.641  30.893  53.616  1.00 39.37
ATOM   1184  CE  LYS A 153       8.121  30.506  55.015  1.00 29.09
ATOM   1185  NZ  LYS A 153       9.556  30.152  55.112  1.00 26.03
ATOM   1186  N   LEU A 154       3.732  33.321  50.896  1.00 32.13
ATOM   1187  CA  LEU A 154       3.285  33.639  49.544  1.00 30.67
ATOM   1188  C   LEU A 154       4.279  34.475  48.789  1.00 40.67
ATOM   1189  O   LEU A 154       5.264  35.000  49.344  1.00 42.56
ATOM   1190  CB  LEU A 154       1.966  34.432  49.515  1.00 30.10
ATOM   1191  CG  LEU A 154       2.084  35.793  50.207  1.00 35.20
ATOM   1192  CD1 LEU A 154       0.989  36.716  49.690  1.00 37.21
ATOM   1193  CD2 LEU A 154       1.934  35.608  51.715  1.00 33.07
ATOM   1194  N   THR A 155       3.963  34.610  47.499  1.00 37.82
ATOM   1195  CA  THR A 155       4.728  35.449  46.596  1.00 38.44
ATOM   1196  C   THR A 155       3.934  36.730  46.389  1.00 41.52
ATOM   1197  O   THR A 155       2.738  36.775  46.674  1.00 43.95
ATOM   1198  CB  THR A 155       5.041  34.814  45.230  1.00 36.99
ATOM   1199  OG1 THR A 155       3.886  34.281  44.584  1.00 32.59
ATOM   1200  CG2 THR A 155       6.133  33.790  45.404  1.00 18.24
ATOM   1201  N   TYR A 156       4.563  37.768  45.892  1.00 33.87
ATOM   1202  CA  TYR A 156       3.835  39.003  45.683  1.00 32.49
ATOM   1203  C   TYR A 156       4.509  39.922  44.717  1.00 37.91
ATOM   1204  O   TYR A 156       5.725  39.940  44.562  1.00 39.04
ATOM   1205  CB  TYR A 156       3.534  39.795  46.983  1.00 31.16
ATOM   1206  CG  TYR A 156       4.642  40.731  47.471  1.00 28.94
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ATOM   1207  CD1 TYR A 156       4.817  42.021  46.969  1.00 30.33
ATOM   1208  CD2 TYR A 156       5.525  40.303  48.465  1.00 30.43
ATOM   1209  CE1 TYR A 156       5.829  42.853  47.459  1.00 36.89
ATOM   1210  CE2 TYR A 156       6.553  41.104  48.960  1.00 31.47
ATOM   1211  CZ  TYR A 156       6.690  42.396  48.462  1.00 43.34
ATOM   1212  OH  TYR A 156       7.701  43.180  48.956  1.00 36.86
ATOM   1213  N   THR A 157       3.657  40.689  44.101  1.00 36.75
ATOM   1214  CA  THR A 157       4.036  41.691  43.171  1.00 38.49
ATOM   1215  C   THR A 157       3.346  42.942  43.611  1.00 42.61
ATOM   1216  O   THR A 157       2.228  42.913  44.143  1.00 38.45
ATOM   1217  CB  THR A 157       3.631  41.316  41.751  1.00 39.73
ATOM   1218  OG1 THR A 157       2.380  40.655  41.803  1.00 55.71
ATOM   1219  CG2 THR A 157       4.680  40.370  41.212  1.00 26.71
ATOM   1220  N   ALA A 158       4.037  44.025  43.404  1.00 41.36
ATOM   1221  CA  ALA A 158       3.488  45.273  43.789  1.00 41.08
ATOM   1222  C   ALA A 158       3.869  46.401  42.839  1.00 50.77
ATOM   1223  O   ALA A 158       4.919  46.390  42.179  1.00 53.47
ATOM   1224  CB  ALA A 158       3.910  45.570  45.212  1.00 39.87
ATOM   1225  N   GLU A 159       2.974  47.376  42.788  1.00 43.90
ATOM   1226  CA  GLU A 159       3.107  48.604  42.023  1.00 42.27
ATOM   1227  C   GLU A 159       2.451  49.705  42.843  1.00 42.17
ATOM   1228  O   GLU A 159       1.257  49.630  43.227  1.00 41.00
ATOM   1229  CB  GLU A 159       2.641  48.521  40.571  1.00 43.72
ATOM   1230  CG  GLU A 159       1.943  47.197  40.255  1.00 62.90
ATOM   1231  CD  GLU A 159       1.502  47.156  38.835  1.00 91.28
ATOM   1232  OE1 GLU A 159       2.202  46.696  37.955  1.00 77.84
ATOM   1233  OE2 GLU A 159       0.322  47.707  38.644  1.00100.00
ATOM   1234  N   VAL A 160       3.263  50.686  43.197  1.00 34.67
ATOM   1235  CA  VAL A 160       2.738  51.717  44.044  1.00 36.57
ATOM   1236  C   VAL A 160       3.024  53.091  43.533  1.00 43.02
ATOM   1237  O   VAL A 160       4.121  53.380  43.050  1.00 42.71
ATOM   1238  CB  VAL A 160       3.180  51.530  45.500  1.00 40.73
ATOM   1239  CG1 VAL A 160       3.988  50.239  45.644  1.00 38.56
ATOM   1240  CG2 VAL A 160       4.006  52.728  45.963  1.00 40.46
ATOM   1241  N   SER A 161       2.002  53.922  43.653  1.00 41.79
ATOM   1242  CA  SER A 161       2.076  55.292  43.185  1.00 42.07
ATOM   1243  C   SER A 161       2.532  56.204  44.270  1.00 44.28
ATOM   1244  O   SER A 161       2.047  56.121  45.403  1.00 43.60
ATOM   1245  CB  SER A 161       0.751  55.801  42.635  1.00 43.32
ATOM   1246  OG  SER A 161       0.971  56.850  41.726  1.00 49.40
ATOM   1247  N   VAL A 162       3.447  57.080  43.896  1.00 36.49
ATOM   1248  CA  VAL A 162       3.979  58.019  44.838  1.00 34.99
ATOM   1249  C   VAL A 162       4.273  59.319  44.148  1.00 42.57
ATOM   1250  O   VAL A 162       4.470  59.354  42.932  1.00 44.41
ATOM   1251  CB  VAL A 162       5.300  57.498  45.402  1.00 35.97
ATOM   1252  CG1 VAL A 162       5.084  56.219  46.188  1.00 36.12
ATOM   1253  CG2 VAL A 162       6.222  57.194  44.239  1.00 35.42
ATOM   1254  N   PRO A 163       4.332  60.377  44.942  1.00 32.95
ATOM   1255  CA  PRO A 163       4.664  61.662  44.400  1.00 31.07
ATOM   1256  C   PRO A 163       5.966  61.496  43.652  1.00 39.67
ATOM   1257  O   PRO A 163       6.919  60.892  44.142  1.00 42.78
ATOM   1258  CB  PRO A 163       4.780  62.562  45.618  1.00 31.62
ATOM   1259  CG  PRO A 163       3.946  61.893  46.714  1.00 33.93
ATOM   1260  CD  PRO A 163       3.652  60.480  46.259  1.00 28.53
ATOM   1261  N   LYS A 164       5.962  61.978  42.436  1.00 38.52
ATOM   1262  CA  LYS A 164       7.086  61.860  41.539  1.00 39.97
ATOM   1263  C   LYS A 164       8.451  62.222  42.088  1.00 42.75
ATOM   1264  O   LYS A 164       9.453  61.708  41.593  1.00 44.47
ATOM   1265  CB  LYS A 164       6.828  62.479  40.177  1.00 44.67
ATOM   1266  CG  LYS A 164       6.004  63.758  40.257  1.00 78.05
ATOM   1267  CD  LYS A 164       6.651  64.918  39.497  1.00100.00
ATOM   1268  CE  LYS A 164       6.016  66.289  39.772  1.00100.00
ATOM   1269  NZ  LYS A 164       6.679  67.075  40.835  1.00100.00
ATOM   1270  N   GLU A 165       8.519  63.097  43.082  1.00 37.25
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ATOM   1271  CA  GLU A 165       9.814  63.489  43.665  1.00 39.56
ATOM   1272  C   GLU A 165      10.333  62.462  44.677  1.00 46.39
ATOM   1273  O   GLU A 165      11.531  62.318  44.927  1.00 48.93
ATOM   1274  CB  GLU A 165       9.797  64.902  44.297  1.00 42.10
ATOM   1275  CG  GLU A 165       8.602  65.156  45.257  1.00 58.16
ATOM   1276  CD  GLU A 165       7.214  64.970  44.664  1.00 88.01
ATOM   1277  OE1 GLU A 165       6.994  64.757  43.475  1.00 79.46
ATOM   1278  OE2 GLU A 165       6.266  65.050  45.575  1.00 70.27
ATOM   1279  N   LEU A 166       9.398  61.733  45.265  1.00 40.39
ATOM   1280  CA  LEU A 166       9.696  60.733  46.254  1.00 36.56
ATOM   1281  C   LEU A 166       9.934  59.377  45.640  1.00 47.57
ATOM   1282  O   LEU A 166       9.366  59.080  44.581  1.00 52.86
ATOM   1283  CB  LEU A 166       8.525  60.630  47.250  1.00 31.92
ATOM   1284  CG  LEU A 166       8.315  61.912  48.057  1.00 29.18
ATOM   1285  CD1 LEU A 166       7.363  61.590  49.189  1.00 25.96
ATOM   1286  CD2 LEU A 166       9.635  62.467  48.622  1.00 23.78
ATOM   1287  N   VAL A 167      10.769  58.564  46.328  1.00 34.75
ATOM   1288  CA  VAL A 167      11.077  57.218  45.908  1.00 30.00
ATOM   1289  C   VAL A 167      10.332  56.229  46.771  1.00 38.80
ATOM   1290  O   VAL A 167       9.902  56.532  47.879  1.00 40.91
ATOM   1291  CB  VAL A 167      12.549  56.860  46.048  1.00 31.28
ATOM   1292  CG1 VAL A 167      12.854  55.542  45.329  1.00 28.20
ATOM   1293  CG2 VAL A 167      13.456  57.964  45.565  1.00 31.06
ATOM   1294  N   ALA A 168      10.217  55.019  46.257  1.00 36.46
ATOM   1295  CA  ALA A 168       9.584  53.935  46.979  1.00 35.14
ATOM   1296  C   ALA A 168      10.418  52.662  46.836  1.00 43.27
ATOM   1297  O   ALA A 168      10.889  52.343  45.733  1.00 44.74
ATOM   1298  CB  ALA A 168       8.149  53.700  46.550  1.00 34.20
ATOM   1299  N   LEU A 169      10.603  51.960  47.975  1.00 35.27
ATOM   1300  CA  LEU A 169      11.323  50.696  48.069  1.00 29.39
ATOM   1301  C   LEU A 169      10.491  49.635  48.797  1.00 33.87
ATOM   1302  O   LEU A 169       9.604  49.918  49.613  1.00 31.21
ATOM   1303  CB  LEU A 169      12.721  50.835  48.656  1.00 28.62
ATOM   1304  CG  LEU A 169      13.593  51.810  47.891  1.00 35.90
ATOM   1305  CD1 LEU A 169      14.953  51.819  48.558  1.00 39.38
ATOM   1306  CD2 LEU A 169      13.765  51.394  46.432  1.00 37.35
ATOM   1307  N   MET A 170      10.758  48.381  48.479  1.00 34.23
ATOM   1308  CA  MET A 170      10.012  47.291  49.069  1.00 31.07
ATOM   1309  C   MET A 170      10.874  46.083  49.287  1.00 34.13
ATOM   1310  O   MET A 170      11.995  45.973  48.775  1.00 35.20
ATOM   1311  CB  MET A 170       8.842  46.882  48.154  1.00 31.95
ATOM   1312  CG  MET A 170       7.751  47.934  48.116  1.00 33.13
ATOM   1313  SD  MET A 170       6.105  47.253  47.815  1.00 34.54
ATOM   1314  CE  MET A 170       5.820  46.349  49.363  1.00 32.25
ATOM   1315  N   SER A 171      10.332  45.165  50.057  1.00 28.20
ATOM   1316  CA  SER A 171      11.064  43.953  50.297  1.00 28.47
ATOM   1317  C   SER A 171      10.929  43.054  49.049  1.00 32.01
ATOM   1318  O   SER A 171      10.396  41.958  49.089  1.00 30.93
ATOM   1319  CB  SER A 171      10.662  43.265  51.606  1.00 30.93
ATOM   1320  OG  SER A 171       9.297  42.920  51.581  1.00 32.90
ATOM   1321  N   ALA A 172      11.401  43.543  47.912  1.00 28.84
ATOM   1322  CA  ALA A 172      11.286  42.773  46.691  1.00 29.48
ATOM   1323  C   ALA A 172      12.241  43.258  45.644  1.00 37.63
ATOM   1324  O   ALA A 172      13.060  44.147  45.881  1.00 35.07
ATOM   1325  CB  ALA A 172       9.884  42.969  46.120  1.00 29.48
ATOM   1326  N   ILE A 173      12.104  42.686  44.452  1.00 39.49
ATOM   1327  CA  ILE A 173      12.966  43.120  43.382  1.00 38.64
ATOM   1328  C   ILE A 173      12.418  44.343  42.648  1.00 44.83
ATOM   1329  O   ILE A 173      11.269  44.394  42.193  1.00 40.97
ATOM   1330  CB  ILE A 173      13.549  42.027  42.479  1.00 38.79
ATOM   1331  CG1 ILE A 173      14.258  40.970  43.302  1.00 37.40
ATOM   1332  CG2 ILE A 173      14.606  42.621  41.570  1.00 38.88
ATOM   1333  CD1 ILE A 173      15.770  41.069  43.193  1.00 25.93
ATOM   1334  N   ARG A 174      13.286  45.345  42.584  1.00 43.21
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ATOM	1335	CA	ARG	A	174	12.997	46.567	41.917	1.00 42.34
ATOM	1336	C	ARG	A	174	12.630	46.173	40.516	1.00 47.54
ATOM	1337	O	ARG	A	174	13.478	45.667	39.770	1.00 42.08
ATOM	1338	CB	ARG	A	174	14.254	47.422	41.937	1.00 42.47
ATOM	1339	CG	ARG	A	174	14.231	48.450	43.075	1.00 53.40
ATOM	1340	CD	ARG	A	174	15.617	48.917	43.515	1.00 33.80
ATOM	1341	NE	ARG	A	174	16.036	50.083	42.756	1.00 53.32
ATOM	1342	CZ	ARG	A	174	17.221	50.208	42.181	1.00 97.11
ATOM	1343	NH1	ARG	A	174	18.132	49.243	42.266	1.00100.00
ATOM	1344	NH2	ARG	A	174	17.503	51.321	41.489	1.00100.00
ATOM	1345	N	ASP	A	175	11.356	46.356	40.195	1.00 51.12
ATOM	1346	CA	ASP	A	175	10.858	45.981	38.882	1.00 53.89
ATOM	1347	C	ASP	A	175	10.778	47.128	37.885	1.00 58.32
ATOM	1348	O	ASP	A	175	10.455	46.901	36.727	1.00 56.00
ATOM	1349	CB	ASP	A	175	9.533	45.186	38.948	1.00 57.16
ATOM	1350	CG	ASP	A	175	9.196	44.446	37.675	1.00 81.25
ATOM	1351	OD1	ASP	A	175	10.034	44.118	36.851	1.00 83.53
ATOM	1352	OD2	ASP	A	175	7.910	44.176	37.558	1.00 92.45
ATOM	1353	N	GLY	A	176	11.062	48.356	38.331	1.00 58.24
ATOM	1354	CA	GLY	A	176	11.021	49.498	37.438	1.00 57.71
ATOM	1355	C	GLY	A	176	9.969	50.546	37.773	1.00 58.98
ATOM	1356	O	GLY	A	176	9.090	50.371	38.620	1.00 52.04
ATOM	1357	N	GLU	A	177	10.110	51.649	37.050	1.00 63.72
ATOM	1358	CA	GLU	A	177	9.267	52.812	37.172	1.00 67.79
ATOM	1359	C	GLU	A	177	8.874	53.388	35.817	1.00 86.22
ATOM	1360	O	GLU	A	177	9.614	53.364	34.830	1.00 91.14
ATOM	1361	CB	GLU	A	177	9.986	53.902	38.006	1.00 68.25
ATOM	1362	CG	GLU	A	177	11.432	54.145	37.519	1.00 71.58
ATOM	1363	CD	GLU	A	177	12.183	55.088	38.404	1.00 85.08
ATOM	1364	OE1	GLU	A	177	13.045	54.733	39.198	1.00100.00
ATOM	1365	OE2	GLU	A	177	11.765	56.316	38.264	1.00 56.71
ATOM	1366	N	THR	A	178	7.671	53.924	35.835	1.00 84.76
ATOM	1367	CA	THR	A	178	6.684	54.686	35.042	1.00 84.81
ATOM	1368	C	THR	A	178	6.024	55.810	35.855	1.00 90.37
ATOM	1369	O	THR	A	178	5.664	55.655	36.996	1.00 91.10
ATOM	1370	CB	THR	A	178	5.618	53.713	34.561	1.00 89.82
ATOM	1371	OG1	THR	A	178	5.283	52.830	35.636	1.00 80.25
ATOM	1372	CG2	THR	A	178	6.161	52.898	33.396	1.00 93.46
ATOM	1373	N	PRO	A	179	5.921	56.984	35.217	1.00 87.05
ATOM	1374	CA	PRO	A	179	5.365	58.187	35.845	1.00 86.61
ATOM	1375	C	PRO	A	179	3.857	58.419	35.531	1.00 89.04
ATOM	1376	O	PRO	A	179	3.444	59.516	35.140	1.00 91.15
ATOM	1377	CB	PRO	A	179	6.176	59.345	35.301	1.00 88.63
ATOM	1378	CG	PRO	A	179	6.657	58.947	33.895	1.00 92.62
ATOM	1379	CD	PRO	A	179	6.426	57.345	33.902	1.00 87.63
ATOM	1380	N	ASP	A	180	3.020	57.347	35.694	1.00 82.31
ATOM	1381	CA	ASP	A	180	1.616	57.568	35.310	1.00 81.19
ATOM	1382	C	ASP	A	180	0.629	56.743	36.166	1.00 90.72
ATOM	1383	O	ASP	A	180	0.533	55.519	36.072	1.00 91.13
ATOM	1384	CB	ASP	A	180	1.458	57.196	33.827	1.00 82.12
ATOM	1385	CG	ASP	A	180	0.087	57.651	33.327	1.00 95.94
ATOM	1386	OD1	ASP	A	180	-0.155	58.858	33.337	1.00100.00
ATOM	1387	OD2	ASP	A	180	-0.714	56.801	32.946	1.00 94.36
ATOM	1388	N	PRO	A	181	-0.060	57.456	37.086	1.00 92.45
ATOM	1389	CA	PRO	A	181	-1.212	56.934	37.795	1.00 92.02
ATOM	1390	C	PRO	A	181	-2.519	57.566	37.284	1.00100.00
ATOM	1391	O	PRO	A	181	-2.605	58.114	36.192	1.00100.00
ATOM	1392	CB	PRO	A	181	-1.014	57.340	39.210	1.00 92.48
ATOM	1393	CG	PRO	A	181	-0.362	58.734	39.152	1.00 98.39
ATOM	1394	CD	PRO	A	181	0.268	58.736	37.663	1.00 94.17
ATOM	1395	N	GLU	A	182	-3.567	57.456	38.141	1.00100.00
ATOM	1396	CA	GLU	A	182	-4.822	58.161	37.876	1.00 98.21
ATOM	1397	C	GLU	A	182	-5.359	58.856	39.154	1.00100.00
ATOM	1398	O	GLU	A	182	-6.404	59.497	39.167	1.00 99.44

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ATOM   1399  CB  GLU A 182      -5.854  57.142  37.356  1.00 98.57
ATOM   1400  CG  GLU A 182      -5.880  57.077  35.816  1.00100.00
ATOM   1401  CD  GLU A 182      -7.013  57.938  35.300  1.00100.00
ATOM   1402  OE1 GLU A 182      -7.817  58.385  36.105  1.00100.00
ATOM   1403  OE2 GLU A 182      -7.084  58.153  34.091  1.00100.00
ATOM   1404  N   ASP A 183      -4.607  58.672  40.265  1.00 98.63
ATOM   1405  CA  ASP A 183      -5.021  59.257  41.552  1.00 97.49
ATOM   1406  C   ASP A 183      -4.126  60.472  41.932  1.00100.00
ATOM   1407  O   ASP A 183      -3.464  61.061  41.079  1.00100.00
ATOM   1408  CB  ASP A 183      -4.946  58.144  42.619  1.00 98.36
ATOM   1409  CG  ASP A 183      -3.612  57.409  42.547  1.00100.00
ATOM   1410  OD1 ASP A 183      -3.471  56.556  41.668  1.00100.00
ATOM   1411  OD2 ASP A 183      -2.741  57.688  43.364  1.00100.00
ATOM   1412  N   PRO A 184      -4.187  60.906  43.237  1.00 97.96
ATOM   1413  CA  PRO A 184      -3.311  61.985  43.738  1.00 97.92
ATOM   1414  C   PRO A 184      -1.865  61.528  44.071  1.00 97.89
ATOM   1415  O   PRO A 184      -1.348  61.748  45.159  1.00100.00
ATOM   1416  CB  PRO A 184      -3.973  62.561  44.992  1.00 98.86
ATOM   1417  CG  PRO A 184      -5.262  61.777  45.284  1.00100.00
ATOM   1418  CD  PRO A 184      -5.122  60.532  44.284  1.00 97.20
ATOM   1419  N   SER A 185      -1.249  60.840  43.071  1.00 82.40
ATOM   1420  CA  SER A 185       0.196  60.496  43.086  1.00 75.26
ATOM   1421  C   SER A 185       0.748  60.563  41.623  1.00 71.84
ATOM   1422  O   SER A 185      -0.006  60.525  40.670  1.00 77.97
ATOM   1423  CB  SER A 185       0.337  59.068  43.636  1.00 73.41
ATOM   1424  OG  SER A 185       0.672  59.109  45.027  1.00 63.60
ATOM   1425  N   ARG A 186       2.107  60.704  41.461  1.00 57.89
ATOM   1426  CA  ARG A 186       2.650  60.971  40.088  1.00 56.00
ATOM   1427  C   ARG A 186       3.725  59.943  39.633  1.00 59.64
ATOM   1428  O   ARG A 186       4.473  60.157  38.688  1.00 60.30
ATOM   1429  CB  ARG A 186       3.258  62.393  40.064  1.00 63.74
ATOM   1430  CG  ARG A 186       2.339  63.457  40.677  1.00 80.44
ATOM   1431  CD  ARG A 186       1.188  63.874  39.736  1.00 71.31
ATOM   1432  NE  ARG A 186       1.316  63.215  38.436  1.00 79.64
ATOM   1433  CZ  ARG A 186       0.185  62.862  37.784  1.00 95.30
ATOM   1434  NH1 ARG A 186      -0.999  63.109  38.312  1.00 56.25
ATOM   1435  NH2 ARG A 186       0.276  62.232  36.603  1.00 89.98
ATOM   1436  N   LYS A 187       3.892  58.778  40.265  1.00 54.50
ATOM   1437  CA  LYS A 187       4.891  57.805  39.851  1.00 51.93
ATOM   1438  C   LYS A 187       4.506  56.436  40.276  1.00 52.96
ATOM   1439  O   LYS A 187       3.971  56.236  41.368  1.00 53.58
ATOM   1440  CB  LYS A 187       6.247  58.047  40.470  1.00 53.78
ATOM   1441  CG  LYS A 187       7.427  57.714  39.574  1.00 43.05
ATOM   1442  CD  LYS A 187       8.517  58.761  39.762  1.00 53.36
ATOM   1443  CE  LYS A 187       9.870  58.468  39.146  1.00 39.68
ATOM   1444  NZ  LYS A 187      10.795  59.601  39.341  1.00 40.19
ATOM   1445  N   ILE A 188       4.819  55.502  39.403  1.00 46.36
ATOM   1446  CA  ILE A 188       4.565  54.128  39.700  1.00 43.57
ATOM   1447  C   ILE A 188       5.824  53.311  39.851  1.00 42.64
ATOM   1448  O   ILE A 188       6.647  53.189  38.937  1.00 41.55
ATOM   1449  CB  ILE A 188       3.579  53.425  38.826  1.00 45.64
ATOM   1450  CG1 ILE A 188       2.193  54.021  39.047  1.00 45.82
ATOM   1451  CG2 ILE A 188       3.590  51.969  39.273  1.00 43.43
ATOM   1452  CD1 ILE A 188       1.448  53.505  40.276  1.00 62.08
ATOM   1453  N   TYR A 189       5.950  52.757  41.042  1.00 35.58
ATOM   1454  CA  TYR A 189       7.079  51.933  41.356  1.00 37.57
ATOM   1455  C   TYR A 189       6.652  50.465  41.359  1.00 44.89
ATOM   1456  O   TYR A 189       5.656  50.092  41.999  1.00 44.33
ATOM   1457  CB  TYR A 189       7.752  52.392  42.661  1.00 37.85
ATOM   1458  CG  TYR A 189       8.692  53.563  42.456  1.00 34.49
ATOM   1459  CD1 TYR A 189       9.968  53.375  41.930  1.00 35.93
ATOM   1460  CD2 TYR A 189       8.310  54.859  42.813  1.00 32.44
ATOM   1461  CE1 TYR A 189      10.843  54.449  41.753  1.00 36.88
ATOM   1462  CE2 TYR A 189       9.170  55.945  42.647  1.00 31.63
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ATOM   1463  CZ  TYR A 189      10.441  55.734  42.113  1.00 44.54
ATOM   1464  OH  TYR A 189      11.296  56.788  41.929  1.00 57.77
ATOM   1465  N   LYS A 190       7.413  49.651  40.608  1.00 42.91
ATOM   1466  CA  LYS A 190       7.173  48.210  40.420  1.00 42.22
ATOM   1467  C   LYS A 190       8.152  47.262  41.143  1.00 40.73
ATOM   1468  O   LYS A 190       9.398  47.400  41.093  1.00 35.69
ATOM   1469  CB  LYS A 190       7.007  47.839  38.944  1.00 45.87
ATOM   1470  CG  LYS A 190       5.735  48.403  38.306  1.00 71.08
ATOM   1471  CD  LYS A 190       5.758  48.384  36.779  1.00 84.62
ATOM   1472  CE  LYS A 190       4.386  48.157  36.147  1.00100.00
ATOM   1473  NZ  LYS A 190       4.299  46.930  35.329  1.00100.00
ATOM   1474  N   PHE A 191       7.539  46.264  41.812  1.00 35.01
ATOM   1475  CA  PHE A 191       8.276  45.304  42.592  1.00 31.57
ATOM   1476  C   PHE A 191       7.792  43.871  42.465  1.00 30.89
ATOM   1477  O   PHE A 191       6.603  43.584  42.377  1.00 25.06
ATOM   1478  CB  PHE A 191       8.217  45.734  44.080  1.00 32.11
ATOM   1479  CG  PHE A 191       8.570  47.190  44.372  1.00 29.24
ATOM   1480  CD1 PHE A 191       9.895  47.593  44.539  1.00 31.81
ATOM   1481  CD2 PHE A 191       7.565  48.147  44.508  1.00 30.17
ATOM   1482  CE1 PHE A 191      10.230  48.925  44.805  1.00 34.10
ATOM   1483  CE2 PHE A 191       7.866  49.483  44.776  1.00 33.69
ATOM   1484  CZ  PHE A 191       9.201  49.860  44.928  1.00 33.32
ATOM   1485  N   ILE A 192       8.764  42.961  42.505  1.00 35.75
ATOM   1486  CA  ILE A 192       8.525  41.520  42.415  1.00 37.02
ATOM   1487  C   ILE A 192       9.255  40.653  43.469  1.00 33.05
ATOM   1488  O   ILE A 192      10.489  40.672  43.593  1.00 30.73
ATOM   1489  CB  ILE A 192       8.850  40.970  41.025  1.00 42.45
ATOM   1490  CG1 ILE A 192       8.289  41.914  39.981  1.00 46.39
ATOM   1491  CG2 ILE A 192       8.251  39.567  40.859  1.00 44.02
ATOM   1492  CD1 ILE A 192       7.609  41.231  38.798  1.00 69.61
ATOM   1493  N   GLN A 193       8.459  39.864  44.195  1.00 27.51
ATOM   1494  CA  GLN A 193       8.954  38.908  45.177  1.00 32.05
ATOM   1495  C   GLN A 193       8.626  37.488  44.757  1.00 44.32
ATOM   1496  O   GLN A 193       7.583  36.926  45.120  1.00 43.11
ATOM   1497  CB  GLN A 193       8.502  39.100  46.638  1.00 33.44
ATOM   1498  CG  GLN A 193       9.285  38.203  47.632  1.00 22.34
ATOM   1499  CD  GLN A 193      10.824  38.337  47.636  1.00 48.52
ATOM   1500  OE1 GLN A 193      11.557  37.537  47.016  1.00 45.24
ATOM   1501  NE2 GLN A 193      11.326  39.330  48.373  1.00 24.82
ATOM   1502  N   LYS A 194       9.543  36.908  43.993  1.00 46.91
ATOM   1503  CA  LYS A 194       9.384  35.540  43.529  1.00 47.56
ATOM   1504  C   LYS A 194       9.456  34.524  44.666  1.00 49.56
ATOM   1505  O   LYS A 194       8.777  33.520  44.598  1.00 50.85
ATOM   1506  CB  LYS A 194      10.385  35.159  42.439  1.00 48.11
ATOM   1507  CG  LYS A 194       9.884  35.443  41.031  1.00 55.70
ATOM   1508  CD  LYS A 194      10.895  36.200  40.179  1.00 67.67
ATOM   1509  CE  LYS A 194      10.614  36.122  38.682  1.00 81.92
ATOM   1510  NZ  LYS A 194      11.284  37.185  37.910  1.00 88.34
ATOM   1511  N   VAL A 195      10.308  34.753  45.689  1.00 39.55
ATOM   1512  CA  VAL A 195      10.422  33.780  46.764  1.00 33.56
ATOM   1513  C   VAL A 195       9.261  33.862  47.698  1.00 35.67
ATOM   1514  O   VAL A 195       8.804  34.945  48.034  1.00 38.69
ATOM   1515  CB  VAL A 195      11.716  33.844  47.560  1.00 32.62
ATOM   1516  CG1 VAL A 195      11.849  32.539  48.310  1.00 32.40
ATOM   1517  CG2 VAL A 195      12.933  34.029  46.667  1.00 30.55
ATOM   1518  N   PRO A 196       8.770  32.717  48.126  1.00 27.75
ATOM   1519  CA  PRO A 196       7.653  32.757  49.038  1.00 26.18
ATOM   1520  C   PRO A 196       8.132  33.236  50.410  1.00 35.86
ATOM   1521  O   PRO A 196       9.185  32.809  50.899  1.00 35.43
ATOM   1522  CB  PRO A 196       7.022  31.359  49.044  1.00 26.04
ATOM   1523  CG  PRO A 196       7.856  30.472  48.113  1.00 27.79
ATOM   1524  CD  PRO A 196       8.964  31.352  47.546  1.00 25.40
ATOM   1525  N   ILE A 197       7.388  34.171  51.009  1.00 29.92
ATOM   1526  CA  ILE A 197       7.772  34.697  52.284  1.00 26.98
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ATOM	1527	C	ILE	A	197	6.544	34.809	53.128	1.00 34.88
ATOM	1528	O	ILE	A	197	5.444	34.788	52.606	1.00 29.68
ATOM	1529	CB	ILE	A	197	8.334	36.100	52.094	1.00 27.90
ATOM	1530	CG1	ILE	A	197	7.342	36.867	51.254	1.00 27.78
ATOM	1531	CG2	ILE	A	197	9.659	36.091	51.337	1.00 28.12
ATOM	1532	CD1	ILE	A	197	7.494	38.378	51.438	1.00 19.03
ATOM	1533	N	PRO	A	198	6.743	34.936	54.447	1.00 36.02
ATOM	1534	CA	PRO	A	198	5.647	35.110	55.410	1.00 31.31
ATOM	1535	C	PRO	A	198	5.299	36.583	55.308	1.00 28.27
ATOM	1536	O	PRO	A	198	6.212	37.391	55.115	1.00 22.70
ATOM	1537	CB	PRO	A	198	6.252	34.849	56.794	1.00 31.17
ATOM	1538	CG	PRO	A	198	7.768	34.768	56.615	1.00 34.94
ATOM	1539	CD	PRO	A	198	8.057	34.706	55.122	1.00 32.99
ATOM	1540	N	CYS	A	199	4.011	36.939	55.405	1.00 27.60
ATOM	1541	CA	CYS	A	199	3.555	38.360	55.289	1.00 27.66
ATOM	1542	C	CYS	A	199	4.255	39.390	56.187	1.00 30.13
ATOM	1543	O	CYS	A	199	4.294	40.596	55.895	1.00 29.50
ATOM	1544	CB	CYS	A	199	2.025	38.534	55.242	1.00 27.18
ATOM	1545	SG	CYS	A	199	1.232	38.279	56.841	1.00 30.85
ATOM	1546	N	TYR	A	200	4.847	38.903	57.270	1.00 26.15
ATOM	1547	CA	TYR	A	200	5.538	39.798	58.123	1.00 28.28
ATOM	1548	C	TYR	A	200	6.760	40.395	57.483	1.00 32.29
ATOM	1549	O	TYR	A	200	7.359	41.286	58.036	1.00 31.56
ATOM	1550	CB	TYR	A	200	5.844	39.215	59.489	1.00 30.59
ATOM	1551	CG	TYR	A	200	6.989	38.272	59.568	1.00 28.28
ATOM	1552	CD1	TYR	A	200	8.288	38.733	59.689	1.00 29.48
ATOM	1553	CD2	TYR	A	200	6.756	36.903	59.475	1.00 27.55
ATOM	1554	CE1	TYR	A	200	9.377	37.862	59.825	1.00 21.42
ATOM	1555	CE2	TYR	A	200	7.838	36.015	59.595	1.00 27.41
ATOM	1556	CZ	TYR	A	200	9.144	36.488	59.737	1.00 25.11
ATOM	1557	OH	TYR	A	200	10.215	35.614	59.880	1.00 27.62
ATOM	1558	N	LEU	A	201	7.113	39.897	56.313	1.00 31.66
ATOM	1559	CA	LEU	A	201	8.278	40.378	55.579	1.00 29.49
ATOM	1560	C	LEU	A	201	7.914	41.343	54.484	1.00 33.65
ATOM	1561	O	LEU	A	201	8.767	41.737	53.686	1.00 35.31
ATOM	1562	CB	LEU	A	201	9.225	39.275	55.035	1.00 27.04
ATOM	1563	CG	LEU	A	201	9.697	38.271	56.071	1.00 27.42
ATOM	1564	CD1	LEU	A	201	10.254	37.030	55.390	1.00 23.71
ATOM	1565	CD2	LEU	A	201	10.764	38.913	56.957	1.00 30.55
ATOM	1566	N	ILE	A	202	6.648	41.710	54.438	1.00 28.66
ATOM	1567	CA	ILE	A	202	6.249	42.674	53.433	1.00 29.57
ATOM	1568	C	ILE	A	202	6.636	44.074	53.951	1.00 40.28
ATOM	1569	O	ILE	A	202	6.192	44.493	55.027	1.00 40.75
ATOM	1570	CB	ILE	A	202	4.733	42.651	53.182	1.00 31.18
ATOM	1571	CG1	ILE	A	202	4.250	41.429	52.405	1.00 28.21
ATOM	1572	CG2	ILE	A	202	4.259	43.962	52.521	1.00 29.23
ATOM	1573	CD1	ILE	A	202	2.724	41.288	52.449	1.00 23.01
ATOM	1574	N	ALA	A	203	7.445	44.813	53.197	1.00 39.14
ATOM	1575	CA	ALA	A	203	7.840	46.150	53.611	1.00 37.03
ATOM	1576	C	ALA	A	203	7.819	47.159	52.482	1.00 34.32
ATOM	1577	O	ALA	A	203	8.060	46.836	51.311	1.00 30.63
ATOM	1578	CB	ALA	A	203	9.180	46.143	54.309	1.00 38.22
ATOM	1579	N	LEU	A	204	7.514	48.388	52.910	1.00 33.64
ATOM	1580	CA	LEU	A	204	7.388	49.604	52.102	1.00 32.56
ATOM	1581	C	LEU	A	204	7.993	50.817	52.812	1.00 37.69
ATOM	1582	O	LEU	A	204	7.854	51.037	54.034	1.00 32.66
ATOM	1583	CB	LEU	A	204	5.906	49.929	51.718	1.00 29.74
ATOM	1584	CG	LEU	A	204	5.706	51.182	50.855	1.00 29.64
ATOM	1585	CD1	LEU	A	204	6.263	50.994	49.445	1.00 29.47
ATOM	1586	CD2	LEU	A	204	4.222	51.515	50.750	1.00 33.50
ATOM	1587	N	VAL	A	205	8.670	51.603	51.991	1.00 36.87
ATOM	1588	CA	VAL	A	205	9.305	52.821	52.415	1.00 35.15
ATOM	1589	C	VAL	A	205	9.224	53.795	51.284	1.00 38.41
ATOM	1590	O	VAL	A	205	9.575	53.462	50.148	1.00 39.50

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ATOM   1591  CB  VAL A 205      10.769  52.651  52.804  1.00 36.06
ATOM   1592  CG1 VAL A 205      11.466  51.794  51.757  1.00 35.08
ATOM   1593  CG2 VAL A 205      11.432  54.020  52.833  1.00 35.98
ATOM   1594  N   VAL A 206       8.750  54.983  51.623  1.00 33.54
ATOM   1595  CA  VAL A 206       8.623  56.104  50.687  1.00 31.81
ATOM   1596  C   VAL A 206       9.300  57.343  51.249  1.00 31.62
ATOM   1597  O   VAL A 206       9.076  57.722  52.406  1.00 34.81
ATOM   1598  CB  VAL A 206       7.179  56.405  50.305  1.00 33.35
ATOM   1599  CG1 VAL A 206       7.129  57.243  49.029  1.00 33.44
ATOM   1600  CG2 VAL A 206       6.452  55.084  50.109  1.00 31.98
ATOM   1601  N   GLY A 207      10.130  57.959  50.431  1.00 24.94
ATOM   1602  CA  GLY A 207      10.807  59.168  50.861  1.00 27.25
ATOM   1603  C   GLY A 207      11.802  59.632  49.838  1.00 38.81
ATOM   1604  O   GLY A 207      12.046  58.966  48.840  1.00 39.82
ATOM   1605  N   ALA A 208      12.375  60.783  50.113  1.00 41.07
ATOM   1606  CA  ALA A 208      13.370  61.354  49.233  1.00 42.72
ATOM   1607  C   ALA A 208      14.660  60.550  49.356  1.00 49.10
ATOM   1608  O   ALA A 208      15.651  60.997  49.957  1.00 51.30
ATOM   1609  CB  ALA A 208      13.605  62.810  49.589  1.00 42.95
ATOM   1610  N   LEU A 209      14.623  59.350  48.773  1.00 40.92
ATOM   1611  CA  LEU A 209      15.739  58.440  48.825  1.00 39.55
ATOM   1612  C   LEU A 209      16.756  58.575  47.743  1.00 47.96
ATOM   1613  O   LEU A 209      16.420  58.843  46.597  1.00 49.44
ATOM   1614  CB  LEU A 209      15.269  56.994  48.894  1.00 37.97
ATOM   1615  CG  LEU A 209      14.420  56.803  50.129  1.00 40.46
ATOM   1616  CD1 LEU A 209      13.713  55.469  50.075  1.00 36.99
ATOM   1617  CD2 LEU A 209      15.283  56.921  51.387  1.00 43.31
ATOM   1618  N   GLU A 210      17.999  58.317  48.182  1.00 42.68
ATOM   1619  CA  GLU A 210      19.205  58.311  47.381  1.00 40.30
ATOM   1620  C   GLU A 210      19.965  57.056  47.693  1.00 47.51
ATOM   1621  O   GLU A 210      19.708  56.432  48.721  1.00 47.89
ATOM   1622  CB  GLU A 210      20.084  59.553  47.613  1.00 42.01
ATOM   1623  CG  GLU A 210      19.699  60.734  46.697  1.00 58.26
ATOM   1624  CD  GLU A 210      20.524  61.970  46.897  1.00100.00
ATOM   1625  OE1 GLU A 210      21.629  61.968  47.451  1.00 95.26
ATOM   1626  OE2 GLU A 210      19.935  63.047  46.486  1.00100.00
ATOM   1627  N   SER A 211      20.895  56.662  46.805  1.00 45.01
ATOM   1628  CA  SER A 211      21.661  55.442  47.013  1.00 42.25
ATOM   1629  C   SER A 211      23.143  55.535  46.667  1.00 43.37
ATOM   1630  O   SER A 211      23.649  56.493  46.086  1.00 46.43
ATOM   1631  CB  SER A 211      21.025  54.233  46.346  1.00 44.33
ATOM   1632  OG  SER A 211      21.274  54.244  44.934  1.00 54.15
ATOM   1633  N   ARG A 212      23.829  54.497  47.053  1.00 34.85
ATOM   1634  CA  ARG A 212      25.229  54.328  46.791  1.00 35.41
ATOM   1635  C   ARG A 212      25.430  52.838  46.567  1.00 45.39
ATOM   1636  O   ARG A 212      24.840  52.027  47.276  1.00 48.85
ATOM   1637  CB  ARG A 212      26.101  54.846  47.915  1.00 37.25
ATOM   1638  CG  ARG A 212      27.151  55.827  47.402  1.00 68.10
ATOM   1639  CD  ARG A 212      26.532  56.962  46.587  1.00 76.55
ATOM   1640  NE  ARG A 212      26.695  58.307  47.148  1.00 55.19
ATOM   1641  CZ  ARG A 212      25.845  59.301  46.867  1.00 70.87
ATOM   1642  NH1 ARG A 212      24.806  59.105  46.059  1.00 35.71
ATOM   1643  NH2 ARG A 212      26.032  60.516  47.392  1.00 73.35
ATOM   1644  N   GLN A 213      26.210  52.442  45.567  1.00 40.74
ATOM   1645  CA  GLN A 213      26.408  51.021  45.331  1.00 39.90
ATOM   1646  C   GLN A 213      27.646  50.537  46.050  1.00 46.34
ATOM   1647  O   GLN A 213      28.740  50.981  45.741  1.00 53.77
ATOM   1648  CB  GLN A 213      26.545  50.741  43.846  1.00 40.99
ATOM   1649  CG  GLN A 213      26.976  49.296  43.532  1.00 55.79
ATOM   1650  CD  GLN A 213      26.292  48.743  42.301  1.00 76.04
ATOM   1651  OE1 GLN A 213      26.275  47.523  42.102  1.00 86.66
ATOM   1652  NE2 GLN A 213      25.700  49.618  41.489  1.00 55.45
ATOM   1653  N   ILE A 214      27.495  49.649  47.013  1.00 33.12
ATOM   1654  CA  ILE A 214      28.663  49.206  47.743  1.00 32.55
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ATOM   1655  C   ILE A 214      28.911  47.765  47.536  1.00 39.29
ATOM   1656  O   ILE A 214      29.726  47.162  48.230  1.00 42.41
ATOM   1657  CB  ILE A 214      28.546  49.428  49.250  1.00 35.72
ATOM   1658  CG1 ILE A 214      27.395  48.573  49.791  1.00 36.13
ATOM   1659  CG2 ILE A 214      28.344  50.911  49.598  1.00 35.79
ATOM   1660  CD1 ILE A 214      27.067  48.841  51.260  1.00 46.69
ATOM   1661  N   GLY A 215      28.199  47.197  46.598  1.00 35.02
ATOM   1662  CA  GLY A 215      28.638  45.855  46.234  1.00 34.88
ATOM   1663  C   GLY A 215      27.970  45.405  44.950  1.00 41.09
ATOM   1664  O   GLY A 215      27.083  46.048  44.425  1.00 44.25
ATOM   1665  N   PRO A 216      28.448  44.262  44.410  1.00 39.62
ATOM   1666  CA  PRO A 216      27.890  43.720  43.197  1.00 39.69
ATOM   1667  C   PRO A 216      26.369  43.661  43.253  1.00 41.56
ATOM   1668  O   PRO A 216      25.655  43.817  42.240  1.00 44.35
ATOM   1669  CB  PRO A 216      28.448  42.311  42.996  1.00 39.91
ATOM   1670  CG  PRO A 216      29.377  41.993  44.164  1.00 41.54
ATOM   1671  CD  PRO A 216      29.514  43.411  44.897  1.00 37.70
ATOM   1672  N   ARG A 217      25.846  43.398  44.477  1.00 31.04
ATOM   1673  CA  ARG A 217      24.421  43.328  44.652  1.00 29.22
ATOM   1674  C   ARG A 217      23.928  44.109  45.872  1.00 38.24
ATOM   1675  O   ARG A 217      22.861  43.885  46.368  1.00 40.69
ATOM   1676  CB  ARG A 217      24.012  41.844  44.790  1.00 22.75
ATOM   1677  CG  ARG A 217      25.221  40.963  45.109  1.00 40.77
ATOM   1678  CD  ARG A 217      24.828  39.774  45.985  1.00 34.08
ATOM   1679  NE  ARG A 217      26.020  39.183  46.581  1.00 45.20
ATOM   1680  CZ  ARG A 217      25.955  37.894  46.911  1.00 65.13
ATOM   1681  NH1 ARG A 217      24.832  37.220  46.716  1.00 42.40
ATOM   1682  NH2 ARG A 217      26.997  37.300  47.472  1.00 48.08
ATOM   1683  N   THR A 218      24.784  45.022  46.404  1.00 31.00
ATOM   1684  CA  THR A 218      24.309  45.886  47.487  1.00 31.00
ATOM   1685  C   THR A 218      24.128  47.319  47.021  1.00 43.60
ATOM   1686  O   THR A 218      25.065  47.930  46.512  1.00 48.42
ATOM   1687  CB  THR A 218      25.315  45.845  48.640  1.00 36.95
ATOM   1688  OG1 THR A 218      25.430  44.517  49.139  1.00 45.66
ATOM   1689  CG2 THR A 218      24.826  46.751  49.766  1.00 34.17
ATOM   1690  N   LEU A 219      23.099  48.018  47.431  1.00 39.19
ATOM   1691  CA  LEU A 219      23.055  49.452  47.315  1.00 38.18
ATOM   1692  C   LEU A 219      22.713  50.000  48.695  1.00 42.32
ATOM   1693  O   LEU A 219      22.108  49.289  49.498  1.00 43.67
ATOM   1694  CB  LEU A 219      21.927  49.841  46.356  1.00 37.05
ATOM   1695  CG  LEU A 219      22.386  50.657  45.168  1.00 39.31
ATOM   1696  CD1 LEU A 219      23.670  50.064  44.613  1.00 40.57
ATOM   1697  CD2 LEU A 219      21.283  50.619  44.131  1.00 29.39
ATOM   1698  N   VAL A 220      23.066  51.241  48.976  1.00 35.01
ATOM   1699  CA  VAL A 220      22.741  51.830  50.253  1.00 36.98
ATOM   1700  C   VAL A 220      21.736  52.923  50.043  1.00 44.08
ATOM   1701  O   VAL A 220      21.959  53.835  49.256  1.00 46.60
ATOM   1702  CB  VAL A 220      23.965  52.346  51.028  1.00 44.95
ATOM   1703  CG1 VAL A 220      23.675  52.428  52.516  1.00 43.16
ATOM   1704  CG2 VAL A 220      25.138  51.382  50.828  1.00 47.70
ATOM   1705  N   TRP A 221      20.622  52.818  50.731  1.00 41.98
ATOM   1706  CA  TRP A 221      19.605  53.828  50.602  1.00 41.64
ATOM   1707  C   TRP A 221      19.464  54.612  51.872  1.00 42.40
ATOM   1708  O   TRP A 221      19.461  54.060  52.960  1.00 45.56
ATOM   1709  CB  TRP A 221      18.256  53.245  50.186  1.00 41.24
ATOM   1710  CG  TRP A 221      18.353  52.459  48.918  1.00 42.59
ATOM   1711  CD1 TRP A 221      18.888  51.225  48.793  1.00 45.35
ATOM   1712  CD2 TRP A 221      17.949  52.873  47.590  1.00 41.62
ATOM   1713  NE1 TRP A 221      18.826  50.832  47.478  1.00 44.74
ATOM   1714  CE2 TRP A 221      18.243  51.821  46.720  1.00 45.31
ATOM   1715  CE3 TRP A 221      17.345  54.009  47.061  1.00 41.17
ATOM   1716  CZ2 TRP A 221      17.958  51.902  45.346  1.00 42.60
ATOM   1717  CZ3 TRP A 221      17.054  54.083  45.710  1.00 39.08
ATOM   1718  CH2 TRP A 221      17.360  53.040  44.864  1.00 38.48
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ATOM   1719  N   SER A 222      19.271  55.896  51.688  1.00 37.01
ATOM   1720  CA  SER A 222      19.017  56.846  52.748  1.00 38.05
ATOM   1721  C   SER A 222      18.853  58.251  52.205  1.00 45.28
ATOM   1722  O   SER A 222      19.005  58.503  51.008  1.00 44.02
ATOM   1723  CB  SER A 222      20.098  56.816  53.820  1.00 39.07
ATOM   1724  OG  SER A 222      21.322  57.149  53.229  1.00 42.36
ATOM   1725  N   GLU A 223      18.586  59.190  53.088  1.00 40.91
ATOM   1726  CA  GLU A 223      18.465  60.527  52.584  1.00 41.97
ATOM   1727  C   GLU A 223      19.843  61.042  52.234  1.00 50.17
ATOM   1728  O   GLU A 223      20.829  60.701  52.863  1.00 52.02
ATOM   1729  CB  GLU A 223      17.856  61.483  53.597  1.00 43.06
ATOM   1730  CG  GLU A 223      16.364  61.262  53.861  1.00 51.71
ATOM   1731  CD  GLU A 223      15.799  62.478  54.545  1.00 84.51
ATOM   1732  OE1 GLU A 223      15.905  63.610  54.085  1.00 56.82
ATOM   1733  OE2 GLU A 223      15.244  62.222  55.705  1.00 88.87
ATOM   1734  N   LYS A 224      19.892  61.875  51.229  1.00 47.39
ATOM   1735  CA  LYS A 224      21.139  62.456  50.792  1.00 48.51
ATOM   1736  C   LYS A 224      22.163  62.683  51.930  1.00 50.90
ATOM   1737  O   LYS A 224      23.382  62.569  51.736  1.00 51.55
ATOM   1738  CB  LYS A 224      20.843  63.736  49.986  1.00 51.58
ATOM   1739  CG  LYS A 224      22.039  64.648  49.723  1.00 81.16
ATOM   1740  CD  LYS A 224      21.954  65.397  48.392  1.00 97.82
ATOM   1741  CE  LYS A 224      21.646  66.891  48.530  1.00100.00
ATOM   1742  NZ  LYS A 224      22.056  67.700  47.362  1.00100.00
ATOM   1743  N   GLU A 225      21.683  63.011  53.123  1.00 45.77
ATOM   1744  CA  GLU A 225      22.607  63.309  54.199  1.00 46.00
ATOM   1745  C   GLU A 225      23.227  62.150  54.902  1.00 47.99
ATOM   1746  O   GLU A 225      24.107  62.354  55.732  1.00 47.21
ATOM   1747  CB  GLU A 225      22.057  64.296  55.210  1.00 47.71
ATOM   1748  CG  GLU A 225      20.530  64.296  55.182  1.00 63.24
ATOM   1749  CD  GLU A 225      19.931  65.219  54.150  1.00 75.13
ATOM   1750  OE1 GLU A 225      20.187  66.420  54.046  1.00 54.64
ATOM   1751  OE2 GLU A 225      19.039  64.578  53.420  1.00 49.64
ATOM   1752  N   GLN A 226      22.798  60.949  54.564  1.00 43.92
ATOM   1753  CA  GLN A 226      23.340  59.772  55.224  1.00 43.91
ATOM   1754  C   GLN A 226      24.036  58.756  54.322  1.00 45.86
ATOM   1755  O   GLN A 226      24.756  57.871  54.806  1.00 45.70
ATOM   1756  CB  GLN A 226      22.252  59.084  56.063  1.00 45.27
ATOM   1757  CG  GLN A 226      21.965  59.790  57.400  1.00 31.17
ATOM   1758  CD  GLN A 226      21.297  61.155  57.302  1.00 44.48
ATOM   1759  OE1 GLN A 226      21.823  62.149  57.820  1.00 37.36
ATOM   1760  NE2 GLN A 226      20.115  61.202  56.696  1.00 30.28
ATOM   1761  N   VAL A 227      23.814  58.871  53.021  1.00 41.20
ATOM   1762  CA  VAL A 227      24.406  57.947  52.071  1.00 43.13
ATOM   1763  C   VAL A 227      25.884  57.670  52.261  1.00 50.55
ATOM   1764  O   VAL A 227      26.298  56.518  52.480  1.00 53.01
ATOM   1765  CB  VAL A 227      24.155  58.293  50.604  1.00 49.39
ATOM   1766  CG1 VAL A 227      24.319  57.029  49.771  1.00 48.89
ATOM   1767  CG2 VAL A 227      22.752  58.851  50.421  1.00 50.47
ATOM   1768  N   GLU A 228      26.696  58.718  52.170  1.00 44.08
ATOM   1769  CA  GLU A 228      28.123  58.542  52.310  1.00 41.71
ATOM   1770  C   GLU A 228      28.514  57.871  53.583  1.00 44.20
ATOM   1771  O   GLU A 228      29.227  56.868  53.589  1.00 44.88
ATOM   1772  CB  GLU A 228      28.935  59.824  52.102  1.00 43.08
ATOM   1773  CG  GLU A 228      29.153  60.161  50.611  1.00 64.74
ATOM   1774  CD  GLU A 228      29.114  58.965  49.701  1.00 84.29
ATOM   1775  OE1 GLU A 228      29.975  58.107  49.685  1.00 84.36
ATOM   1776  OE2 GLU A 228      28.064  58.951  48.917  1.00 73.81
ATOM   1777  N   LYS A 229      28.066  58.423  54.685  1.00 39.79
ATOM   1778  CA  LYS A 229      28.449  57.796  55.922  1.00 39.04
ATOM   1779  C   LYS A 229      27.949  56.375  55.930  1.00 40.38
ATOM   1780  O   LYS A 229      28.639  55.433  56.346  1.00 43.63
ATOM   1781  CB  LYS A 229      28.129  58.585  57.187  1.00 39.79
ATOM   1782  CG  LYS A 229      28.903  58.072  58.394  1.00 63.75
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ATOM	1783	CD	LYS	A	229	28.498	58.763	59.685	1.00 77.46
ATOM	1784	CE	LYS	A	229	29.677	59.084	60.593	1.00 94.73
ATOM	1785	NZ	LYS	A	229	30.344	60.353	60.256	1.00100.00
ATOM	1786	N	SER	A	230	26.741	56.220	55.428	1.00 28.48
ATOM	1787	CA	SER	A	230	26.174	54.891	55.377	1.00 25.93
ATOM	1788	C	SER	A	230	27.089	53.988	54.587	1.00 30.26
ATOM	1789	O	SER	A	230	27.469	52.855	54.955	1.00 28.48
ATOM	1790	CB	SER	A	230	24.824	54.927	54.694	1.00 30.08
ATOM	1791	OG	SER	A	230	23.822	55.293	55.605	1.00 41.60
ATOM	1792	N	ALA	A	231	27.436	54.536	53.459	1.00 31.13
ATOM	1793	CA	ALA	A	231	28.288	53.820	52.593	1.00 36.66
ATOM	1794	C	ALA	A	231	29.597	53.383	53.270	1.00 47.68
ATOM	1795	O	ALA	A	231	30.003	52.238	53.103	1.00 54.59
ATOM	1796	CB	ALA	A	231	28.406	54.518	51.257	1.00 38.49
ATOM	1797	N	TYR	A	232	30.256	54.246	54.060	1.00 40.77
ATOM	1798	CA	TYR	A	232	31.500	53.830	54.730	1.00 38.40
ATOM	1799	C	TYR	A	232	31.265	52.721	55.753	1.00 39.70
ATOM	1800	O	TYR	A	232	32.041	51.772	55.862	1.00 36.46
ATOM	1801	CB	TYR	A	232	32.311	54.981	55.414	1.00 38.27
ATOM	1802	CG	TYR	A	232	33.497	54.525	56.303	1.00 42.36
ATOM	1803	CD1	TYR	A	232	34.755	54.238	55.753	1.00 46.41
ATOM	1804	CD2	TYR	A	232	33.373	54.394	57.691	1.00 40.99
ATOM	1805	CE1	TYR	A	232	35.835	53.815	56.534	1.00 47.23
ATOM	1806	CE2	TYR	A	232	34.441	53.979	58.496	1.00 40.10
ATOM	1807	CZ	TYR	A	232	35.680	53.695	57.916	1.00 48.59
ATOM	1808	OH	TYR	A	232	36.734	53.282	58.698	1.00 51.92
ATOM	1809	N	GLU	A	233	30.191	52.883	56.519	1.00 35.75
ATOM	1810	CA	GLU	A	233	29.835	51.984	57.606	1.00 34.55
ATOM	1811	C	GLU	A	233	29.633	50.498	57.252	1.00 38.39
ATOM	1812	O	GLU	A	233	30.152	49.576	57.892	1.00 38.55
ATOM	1813	CB	GLU	A	233	28.673	52.623	58.414	1.00 34.48
ATOM	1814	CG	GLU	A	233	28.666	52.262	59.912	1.00 24.95
ATOM	1815	CD	GLU	A	233	29.463	53.183	60.787	1.00 37.55
ATOM	1816	OE1	GLU	A	233	29.408	54.410	60.741	1.00 55.33
ATOM	1817	OE2	GLU	A	233	30.216	52.518	61.619	1.00 40.65
ATOM	1818	N	PHE	A	234	28.867	50.282	56.202	1.00 33.02
ATOM	1819	CA	PHE	A	234	28.493	48.974	55.719	1.00 29.90
ATOM	1820	C	PHE	A	234	29.341	48.398	54.592	1.00 34.69
ATOM	1821	O	PHE	A	234	28.883	47.521	53.823	1.00 34.21
ATOM	1822	CB	PHE	A	234	27.020	49.081	55.293	1.00 30.23
ATOM	1823	CG	PHE	A	234	26.215	49.752	56.394	1.00 30.32
ATOM	1824	CD1	PHE	A	234	26.518	49.521	57.739	1.00 31.50
ATOM	1825	CD2	PHE	A	234	25.151	50.605	56.102	1.00 28.66
ATOM	1826	CE1	PHE	A	234	25.780	50.103	58.772	1.00 30.43
ATOM	1827	CE2	PHE	A	234	24.407	51.203	57.121	1.00 29.60
ATOM	1828	CZ	PHE	A	234	24.725	50.959	58.458	1.00 27.47
ATOM	1829	N	SER	A	235	30.571	48.874	54.476	1.00 29.55
ATOM	1830	CA	SER	A	235	31.428	48.366	53.412	1.00 28.64
ATOM	1831	C	SER	A	235	31.387	46.858	53.338	1.00 30.38
ATOM	1832	O	SER	A	235	31.166	46.252	52.282	1.00 32.37
ATOM	1833	CB	SER	A	235	32.861	48.787	53.604	1.00 31.15
ATOM	1834	OG	SER	A	235	33.028	49.368	54.873	1.00 39.32
ATOM	1835	N	GLU	A	236	31.698	46.299	54.504	1.00 22.49
ATOM	1836	CA	GLU	A	236	31.815	44.873	54.737	1.00 23.79
ATOM	1837	C	GLU	A	236	30.627	43.992	54.380	1.00 32.37
ATOM	1838	O	GLU	A	236	30.697	42.772	54.545	1.00 29.91
ATOM	1839	CB	GLU	A	236	32.305	44.529	56.134	1.00 24.06
ATOM	1840	CG	GLU	A	236	33.491	45.403	56.585	1.00 22.96
ATOM	1841	CD	GLU	A	236	33.600	45.492	58.090	1.00 66.18
ATOM	1842	OE1	GLU	A	236	32.633	45.482	58.849	1.00 37.01
ATOM	1843	OE2	GLU	A	236	34.848	45.518	58.494	1.00 78.68
ATOM	1844	N	THR	A	237	29.560	44.593	53.891	1.00 34.11
ATOM	1845	CA	THR	A	237	28.384	43.823	53.539	1.00 33.69
ATOM	1846	C	THR	A	237	28.644	42.609	52.644	1.00 33.33

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ATOM   1847  O   THR A 237      28.517  41.451  53.048  1.00 31.09
ATOM   1848  CB  THR A 237      27.218  44.710  53.057  1.00 37.99
ATOM   1849  OG1 THR A 237      26.899  45.675  54.048  1.00 33.49
ATOM   1850  CG2 THR A 237      25.995  43.862  52.744  1.00 25.66
ATOM   1851  N   GLU A 238      29.020  42.854  51.409  1.00 29.69
ATOM   1852  CA  GLU A 238      29.267  41.734  50.520  1.00 27.05
ATOM   1853  C   GLU A 238      30.071  40.638  51.146  1.00 33.17
ATOM   1854  O   GLU A 238      29.660  39.497  51.055  1.00 38.50
ATOM   1855  CB  GLU A 238      29.851  42.080  49.161  1.00 27.50
ATOM   1856  CG  GLU A 238      30.116  40.813  48.320  1.00 18.83
ATOM   1857  CD  GLU A 238      28.902  40.297  47.596  1.00 41.67
ATOM   1858  OE1 GLU A 238      27.848  40.909  47.464  1.00 33.59
ATOM   1859  OE2 GLU A 238      29.085  39.089  47.138  1.00 46.30
ATOM   1860  N   SER A 239      31.203  40.973  51.772  1.00 24.44
ATOM   1861  CA  SER A 239      32.045  39.957  52.387  1.00 24.60
ATOM   1862  C   SER A 239      31.245  39.060  53.344  1.00 35.72
ATOM   1863  O   SER A 239      31.379  37.830  53.360  1.00 35.25
ATOM   1864  CB  SER A 239      33.231  40.601  53.074  1.00 29.14
ATOM   1865  OG  SER A 239      32.747  41.590  53.961  1.00 54.60
ATOM   1866  N   MET A 240      30.382  39.703  54.154  1.00 33.13
ATOM   1867  CA  MET A 240      29.529  38.993  55.091  1.00 28.55
ATOM   1868  C   MET A 240      28.603  38.075  54.325  1.00 35.65
ATOM   1869  O   MET A 240      28.435  36.926  54.689  1.00 35.99
ATOM   1870  CB  MET A 240      28.736  39.945  55.993  1.00 26.50
ATOM   1871  CG  MET A 240      29.691  40.675  56.910  1.00 27.57
ATOM   1872  SD  MET A 240      28.871  41.986  57.833  1.00 32.91
ATOM   1873  CE  MET A 240      30.040  42.085  59.183  1.00 28.47
ATOM   1874  N   LEU A 241      28.019  38.603  53.243  1.00 32.77
ATOM   1875  CA  LEU A 241      27.120  37.859  52.381  1.00 29.87
ATOM   1876  C   LEU A 241      27.848  36.615  51.878  1.00 36.76
ATOM   1877  O   LEU A 241      27.302  35.509  51.858  1.00 36.97
ATOM   1878  CB  LEU A 241      26.715  38.753  51.196  1.00 29.71
ATOM   1879  CG  LEU A 241      25.283  39.289  51.237  1.00 37.68
ATOM   1880  CD1 LEU A 241      25.174  40.552  50.389  1.00 35.76
ATOM   1881  CD2 LEU A 241      24.309  38.257  50.673  1.00 45.60
ATOM   1882  N   LYS A 242      29.114  36.806  51.468  1.00 34.76
ATOM   1883  CA  LYS A 242      29.908  35.702  50.972  1.00 33.62
ATOM   1884  C   LYS A 242      30.072  34.690  52.039  1.00 32.18
ATOM   1885  O   LYS A 242      29.887  33.512  51.795  1.00 32.56
ATOM   1886  CB  LYS A 242      31.292  36.069  50.468  1.00 38.43
ATOM   1887  CG  LYS A 242      31.406  36.263  48.961  1.00 49.23
ATOM   1888  CD  LYS A 242      31.160  37.721  48.536  1.00 88.36
ATOM   1889  CE  LYS A 242      32.371  38.456  47.943  1.00100.00
ATOM   1890  NZ  LYS A 242      32.033  39.411  46.862  1.00100.00
ATOM   1891  N   ILE A 243      30.428  35.154  53.227  1.00 30.87
ATOM   1892  CA  ILE A 243      30.627  34.229  54.359  1.00 31.70
ATOM   1893  C   ILE A 243      29.381  33.458  54.764  1.00 36.50
ATOM   1894  O   ILE A 243      29.458  32.303  55.119  1.00 39.33
ATOM   1895  CB  ILE A 243      31.227  34.886  55.579  1.00 32.36
ATOM   1896  CG1 ILE A 243      32.630  35.337  55.222  1.00 32.09
ATOM   1897  CG2 ILE A 243      31.243  33.891  56.718  1.00 28.26
ATOM   1898  CD1 ILE A 243      33.035  36.578  55.981  1.00 20.09
ATOM   1899  N   ALA A 244      28.237  34.120  54.708  1.00 32.10
ATOM   1900  CA  ALA A 244      26.968  33.519  55.066  1.00 32.95
ATOM   1901  C   ALA A 244      26.600  32.392  54.127  1.00 36.35
ATOM   1902  O   ALA A 244      26.074  31.358  54.546  1.00 36.88
ATOM   1903  CB  ALA A 244      25.858  34.576  55.123  1.00 34.02
ATOM   1904  N   GLU A 245      26.890  32.617  52.846  1.00 31.20
ATOM   1905  CA  GLU A 245      26.614  31.635  51.818  1.00 29.26
ATOM   1906  C   GLU A 245      27.360  30.354  52.092  1.00 35.18
ATOM   1907  O   GLU A 245      26.849  29.276  51.800  1.00 36.21
ATOM   1908  CB  GLU A 245      26.908  32.177  50.421  1.00 30.22
ATOM   1909  CG  GLU A 245      25.701  32.938  49.842  1.00 39.79
ATOM   1910  CD  GLU A 245      26.026  33.564  48.529  1.00 51.91
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ATOM   1911  OE1 GLU A 245      26.945  34.351  48.358  1.00 34.19
ATOM   1912  OE2 GLU A 245      25.246  33.142  47.585  1.00 47.48
ATOM   1913  N   ASP A 246      28.570  30.484  52.680  1.00 32.29
ATOM   1914  CA  ASP A 246      29.417  29.350  53.033  1.00 30.70
ATOM   1915  C   ASP A 246      28.848  28.645  54.230  1.00 35.47
ATOM   1916  O   ASP A 246      28.881  27.417  54.347  1.00 37.08
ATOM   1917  CB  ASP A 246      30.873  29.717  53.355  1.00 33.17
ATOM   1918  CG  ASP A 246      31.709  28.473  53.413  1.00 64.49
ATOM   1919  OD1 ASP A 246      31.934  27.789  52.437  1.00 67.15
ATOM   1920  OD2 ASP A 246      32.118  28.167  54.622  1.00 79.01
ATOM   1921  N   LEU A 247      28.323  29.434  55.134  1.00 33.59
ATOM   1922  CA  LEU A 247      27.731  28.868  56.334  1.00 36.70
ATOM   1923  C   LEU A 247      26.355  28.208  56.083  1.00 35.92
ATOM   1924  O   LEU A 247      26.060  27.110  56.551  1.00 30.77
ATOM   1925  CB  LEU A 247      27.562  29.954  57.435  1.00 38.34
ATOM   1926  CG  LEU A 247      28.732  30.100  58.394  1.00 44.30
ATOM   1927  CD1 LEU A 247      29.341  28.738  58.641  1.00 48.20
ATOM   1928  CD2 LEU A 247      29.779  31.013  57.815  1.00 35.25
ATOM   1929  N   GLY A 248      25.471  28.887  55.353  1.00 34.97
ATOM   1930  CA  GLY A 248      24.160  28.315  55.181  1.00 36.00
ATOM   1931  C   GLY A 248      23.754  27.976  53.778  1.00 37.99
ATOM   1932  O   GLY A 248      22.637  27.524  53.526  1.00 38.13
ATOM   1933  N   GLY A 249      24.637  28.158  52.849  1.00 30.74
ATOM   1934  CA  GLY A 249      24.203  27.852  51.526  1.00 30.15
ATOM   1935  C   GLY A 249      23.918  29.131  50.759  1.00 38.91
ATOM   1936  O   GLY A 249      24.126  30.240  51.238  1.00 41.32
ATOM   1937  N   PRO A 250      23.453  28.946  49.547  1.00 38.93
ATOM   1938  CA  PRO A 250      23.173  30.021  48.639  1.00 38.03
ATOM   1939  C   PRO A 250      22.203  31.078  49.096  1.00 42.17
ATOM   1940  O   PRO A 250      21.258  30.823  49.840  1.00 45.20
ATOM   1941  CB  PRO A 250      22.663  29.357  47.352  1.00 39.18
ATOM   1942  CG  PRO A 250      22.952  27.864  47.436  1.00 41.01
ATOM   1943  CD  PRO A 250      23.396  27.610  48.865  1.00 38.57
ATOM   1944  N   TYR A 251      22.486  32.275  48.600  1.00 35.37
ATOM   1945  CA  TYR A 251      21.692  33.461  48.817  1.00 34.87
ATOM   1946  C   TYR A 251      20.740  33.479  47.649  1.00 39.55
ATOM   1947  O   TYR A 251      21.125  33.794  46.535  1.00 42.57
ATOM   1948  CB  TYR A 251      22.540  34.759  48.790  1.00 35.07
ATOM   1949  CG  TYR A 251      21.711  35.980  49.119  1.00 35.25
ATOM   1950  CD1 TYR A 251      21.341  36.229  50.441  1.00 33.14
ATOM   1951  CD2 TYR A 251      21.260  36.846  48.121  1.00 37.98
ATOM   1952  CE1 TYR A 251      20.575  37.341  50.781  1.00 28.05
ATOM   1953  CE2 TYR A 251      20.492  37.967  48.443  1.00 40.05
ATOM   1954  CZ  TYR A 251      20.160  38.213  49.777  1.00 42.84
ATOM   1955  OH  TYR A 251      19.409  39.307  50.112  1.00 39.70
ATOM   1956  N   VAL A 252      19.510  33.102  47.914  1.00 32.21
ATOM   1957  CA  VAL A 252      18.495  33.003  46.899  1.00 30.05
ATOM   1958  C   VAL A 252      17.708  34.279  46.631  1.00 38.47
ATOM   1959  O   VAL A 252      17.000  34.340  45.640  1.00 40.65
ATOM   1960  CB  VAL A 252      17.560  31.845  47.253  1.00 31.27
ATOM   1961  CG1 VAL A 252      18.378  30.605  47.643  1.00 28.15
ATOM   1962  CG2 VAL A 252      16.614  32.234  48.405  1.00 30.93
ATOM   1963  N   TRP A 253      17.800  35.292  47.504  1.00 32.44
ATOM   1964  CA  TRP A 253      17.041  36.509  47.309  1.00 30.93
ATOM   1965  C   TRP A 253      17.468  37.341  46.119  1.00 43.56
ATOM   1966  O   TRP A 253      16.690  38.119  45.568  1.00 46.70
ATOM   1967  CB  TRP A 253      16.898  37.302  48.606  1.00 29.65
ATOM   1968  CG  TRP A 253      16.364  36.369  49.625  1.00 30.19
ATOM   1969  CD1 TRP A 253      17.086  35.546  50.413  1.00 32.81
ATOM   1970  CD2 TRP A 253      14.989  36.110  49.913  1.00 29.63
ATOM   1971  NE1 TRP A 253      16.251  34.794  51.194  1.00 30.69
ATOM   1972  CE2 TRP A 253      14.955  35.128  50.912  1.00 31.50
ATOM   1973  CE3 TRP A 253      13.789  36.637  49.450  1.00 30.18
ATOM   1974  CZ2 TRP A 253      13.746  34.657  51.433  1.00 30.31
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ATOM   1975  CZ3 TRP A 253      12.600  36.164  49.958  1.00 31.14
ATOM   1976  CH2 TRP A 253      12.579  35.176  50.946  1.00 31.37
ATOM   1977  N   GLY A 254      18.697  37.182  45.675  1.00 42.35
ATOM   1978  CA  GLY A 254      19.101  37.944  44.509  1.00 41.34
ATOM   1979  C   GLY A 254      19.875  39.192  44.858  1.00 45.47
ATOM   1980  O   GLY A 254      21.079  39.236  44.671  1.00 45.89
ATOM   1981  N   GLN A 255      19.160  40.210  45.351  1.00 41.86
ATOM   1982  CA  GLN A 255      19.746  41.488  45.675  1.00 38.67
ATOM   1983  C   GLN A 255      19.576  41.776  47.153  1.00 40.18
ATOM   1984  O   GLN A 255      18.494  41.811  47.659  1.00 38.67
ATOM   1985  CB  GLN A 255      19.023  42.552  44.836  1.00 37.82
ATOM   1986  CG  GLN A 255      19.455  43.979  45.169  1.00 50.17
ATOM   1987  CD  GLN A 255      20.618  44.368  44.283  1.00 62.88
ATOM   1988  OE1 GLN A 255      21.104  43.612  43.463  1.00 55.76
ATOM   1989  NE2 GLN A 255      21.057  45.625  44.479  1.00 34.97
ATOM   1990  N   TYR A 256      20.716  41.900  47.866  1.00 33.01
ATOM   1991  CA  TYR A 256      20.651  42.361  49.258  1.00 28.69
ATOM   1992  C   TYR A 256      20.891  43.854  49.329  1.00 26.72
ATOM   1993  O   TYR A 256      21.963  44.321  49.225  1.00 24.22
ATOM   1994  CB  TYR A 256      21.743  41.629  50.075  1.00 29.99
ATOM   1995  CG  TYR A 256      21.567  41.867  51.556  1.00 35.47
ATOM   1996  CD1 TYR A 256      20.582  41.200  52.250  1.00 35.76
ATOM   1997  CD2 TYR A 256      22.405  42.746  52.239  1.00 37.52
ATOM   1998  CE1 TYR A 256      20.436  41.396  53.599  1.00 25.80
ATOM   1999  CE2 TYR A 256      22.255  42.946  53.588  1.00 39.10
ATOM   2000  CZ  TYR A 256      21.283  42.275  54.268  1.00 31.78
ATOM   2001  OH  TYR A 256      21.153  42.433  55.631  1.00 37.35
ATOM   2002  N   ASP A 257      19.834  44.613  49.463  1.00 23.26
ATOM   2003  CA  ASP A 257      20.077  46.027  49.621  1.00 23.47
ATOM   2004  C   ASP A 257      19.977  46.444  51.071  1.00 35.90
ATOM   2005  O   ASP A 257      19.729  45.661  51.967  1.00 39.48
ATOM   2006  CB  ASP A 257      19.073  46.803  48.758  1.00 24.13
ATOM   2007  CG  ASP A 257      19.689  47.030  47.388  1.00 38.50
ATOM   2008  OD1 ASP A 257      20.843  46.675  47.220  1.00 42.61
ATOM   2009  OD2 ASP A 257      19.020  47.555  46.517  1.00 29.02
ATOM   2010  N   LEU A 258      20.370  47.661  51.386  1.00 30.86
ATOM   2011  CA  LEU A 258      20.306  48.159  52.735  1.00 27.50
ATOM   2012  C   LEU A 258      19.526  49.466  52.765  1.00 36.37
ATOM   2013  O   LEU A 258      19.620  50.302  51.840  1.00 37.98
ATOM   2014  CB  LEU A 258      21.727  48.442  53.274  1.00 24.71
ATOM   2015  CG  LEU A 258      22.552  47.191  53.491  1.00 31.13
ATOM   2016  CD1 LEU A 258      23.913  47.567  54.043  1.00 30.89
ATOM   2017  CD2 LEU A 258      21.854  46.282  54.500  1.00 33.65
ATOM   2018  N   LEU A 259      18.762  49.632  53.838  1.00 29.87
ATOM   2019  CA  LEU A 259      18.006  50.849  54.052  1.00 28.43
ATOM   2020  C   LEU A 259      18.283  51.453  55.446  1.00 31.30
ATOM   2021  O   LEU A 259      18.055  50.819  56.477  1.00 31.19
ATOM   2022  CB  LEU A 259      16.500  50.809  53.693  1.00 27.63
ATOM   2023  CG  LEU A 259      15.706  51.980  54.298  1.00 31.51
ATOM   2024  CD1 LEU A 259      16.026  53.300  53.605  1.00 32.32
ATOM   2025  CD2 LEU A 259      14.212  51.731  54.253  1.00 26.87
ATOM   2026  N   VAL A 260      18.807  52.683  55.447  1.00 25.88
ATOM   2027  CA  VAL A 260      19.105  53.435  56.638  1.00 25.99
ATOM   2028  C   VAL A 260      17.896  54.336  56.796  1.00 34.83
ATOM   2029  O   VAL A 260      17.647  55.187  55.959  1.00 41.92
ATOM   2030  CB  VAL A 260      20.390  54.234  56.408  1.00 29.97
ATOM   2031  CG1 VAL A 260      20.701  55.179  57.592  1.00 32.08
ATOM   2032  CG2 VAL A 260      21.563  53.295  56.130  1.00 26.15
ATOM   2033  N   LEU A 261      17.098  54.120  57.815  1.00 28.41
ATOM   2034  CA  LEU A 261      15.865  54.878  58.024  1.00 25.52
ATOM   2035  C   LEU A 261      16.016  56.054  58.948  1.00 29.42
ATOM   2036  O   LEU A 261      17.090  56.300  59.489  1.00 29.96
ATOM   2037  CB  LEU A 261      14.874  53.921  58.706  1.00 25.70
ATOM   2038  CG  LEU A 261      14.387  52.877  57.740  1.00 33.14
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ATOM   2039  CD1 LEU A 261      15.161  51.571  57.929  1.00 32.73
ATOM   2040  CD2 LEU A 261      12.900  52.686  57.935  1.00 43.74
ATOM   2041  N   PRO A 262      14.903  56.758  59.142  1.00 28.52
ATOM   2042  CA  PRO A 262      14.894  57.870  60.047  1.00 28.50
ATOM   2043  C   PRO A 262      15.152  57.294  61.432  1.00 35.36
ATOM   2044  O   PRO A 262      14.866  56.124  61.683  1.00 34.52
ATOM   2045  CB  PRO A 262      13.512  58.512  59.971  1.00 29.19
ATOM   2046  CG  PRO A 262      12.707  57.719  58.964  1.00 34.34
ATOM   2047  CD  PRO A 262      13.581  56.575  58.492  1.00 30.63
ATOM   2048  N   PRO A 263      15.706  58.105  62.327  1.00 31.50
ATOM   2049  CA  PRO A 263      16.060  57.657  63.673  1.00 28.77
ATOM   2050  C   PRO A 263      14.966  57.021  64.493  1.00 29.15
ATOM   2051  O   PRO A 263      15.256  56.335  65.434  1.00 26.36
ATOM   2052  CB  PRO A 263      16.652  58.867  64.392  1.00 29.16
ATOM   2053  CG  PRO A 263      16.851  59.954  63.335  1.00 31.55
ATOM   2054  CD  PRO A 263      15.994  59.558  62.138  1.00 29.17
ATOM   2055  N   SER A 264      13.712  57.258  64.143  1.00 33.87
ATOM   2056  CA  SER A 264      12.578  56.703  64.864  1.00 33.81
ATOM   2057  C   SER A 264      12.403  55.223  64.604  1.00 37.36
ATOM   2058  O   SER A 264      11.529  54.570  65.201  1.00 39.61
ATOM   2059  CB  SER A 264      11.280  57.423  64.576  1.00 35.61
ATOM   2060  OG  SER A 264      10.955  57.276  63.201  1.00 53.45
ATOM   2061  N   PHE A 265      13.213  54.684  63.710  1.00 29.00
ATOM   2062  CA  PHE A 265      13.136  53.256  63.453  1.00 28.56
ATOM   2063  C   PHE A 265      13.260  52.491  64.787  1.00 28.49
ATOM   2064  O   PHE A 265      14.208  52.675  65.533  1.00 27.36
ATOM   2065  CB  PHE A 265      14.200  52.833  62.454  1.00 31.40
ATOM   2066  CG  PHE A 265      13.875  51.458  62.028  1.00 34.51
ATOM   2067  CD1 PHE A 265      12.601  51.174  61.543  1.00 35.11
ATOM   2068  CD2 PHE A 265      14.814  50.435  62.156  1.00 38.94
ATOM   2069  CE1 PHE A 265      12.282  49.876  61.154  1.00 37.42
ATOM   2070  CE2 PHE A 265      14.511  49.131  61.772  1.00 42.65
ATOM   2071  CZ  PHE A 265      13.236  48.860  61.274  1.00 40.14
ATOM   2072  N   PRO A 266      12.272  51.650  65.128  1.00 24.06
ATOM   2073  CA  PRO A 266      12.249  50.945  66.419  1.00 20.62
ATOM   2074  C   PRO A 266      13.231  49.794  66.701  1.00 29.34
ATOM   2075  O   PRO A 266      13.343  49.364  67.847  1.00 28.17
ATOM   2076  CB  PRO A 266      10.808  50.463  66.593  1.00 19.16
ATOM   2077  CG  PRO A 266      10.076  50.686  65.281  1.00 21.07
ATOM   2078  CD  PRO A 266      11.046  51.355  64.325  1.00 19.44
ATOM   2079  N   TYR A 267      13.922  49.280  65.676  1.00 27.23
ATOM   2080  CA  TYR A 267      14.849  48.160  65.817  1.00 25.74
ATOM   2081  C   TYR A 267      16.181  48.454  65.189  1.00 32.57
ATOM   2082  O   TYR A 267      16.281  49.316  64.324  1.00 32.48
ATOM   2083  CB  TYR A 267      14.298  46.903  65.121  1.00 25.07
ATOM   2084  CG  TYR A 267      12.968  46.502  65.674  1.00 24.45
ATOM   2085  CD1 TYR A 267      12.915  45.765  66.856  1.00 27.05
ATOM   2086  CD2 TYR A 267      11.776  46.851  65.037  1.00 22.15
ATOM   2087  CE1 TYR A 267      11.697  45.387  67.419  1.00 25.01
ATOM   2088  CE2 TYR A 267      10.548  46.496  65.596  1.00 19.09
ATOM   2089  CZ  TYR A 267      10.510  45.767  66.786  1.00 17.98
ATOM   2090  OH  TYR A 267       9.302  45.416  67.353  1.00 19.51
ATOM   2091  N   GLY A 268      17.196  47.698  65.627  1.00 30.22
ATOM   2092  CA  GLY A 268      18.547  47.826  65.114  1.00 27.29
ATOM   2093  C   GLY A 268      18.485  47.620  63.614  1.00 29.82
ATOM   2094  O   GLY A 268      19.136  48.297  62.836  1.00 32.99
ATOM   2095  N   GLY A 269      17.637  46.676  63.228  1.00 23.19
ATOM   2096  CA  GLY A 269      17.393  46.320  61.853  1.00 21.62
ATOM   2097  C   GLY A 269      16.187  45.402  61.777  1.00 27.53
ATOM   2098  O   GLY A 269      15.681  44.948  62.820  1.00 20.14
ATOM   2099  N   MET A 270      15.735  45.154  60.528  1.00 27.81
ATOM   2100  CA  MET A 270      14.615  44.267  60.176  1.00 25.61
ATOM   2101  C   MET A 270      14.956  43.585  58.874  1.00 33.56
ATOM   2102  O   MET A 270      15.221  44.247  57.867  1.00 34.67
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ATOM	2103	CB	MET	A	270	13.247	44.936	60.028	1.00	26.07
ATOM	2104	CG	MET	A	270	12.195	43.937	59.602	1.00	28.81
ATOM	2105	SD	MET	A	270	11.875	42.742	60.929	1.00	37.39
ATOM	2106	CE	MET	A	270	10.720	41.621	60.082	1.00	35.30
ATOM	2107	N	GLU	A	271	14.995	42.263	58.904	1.00	32.20
ATOM	2108	CA	GLU	A	271	15.393	41.459	57.753	1.00	33.32
ATOM	2109	C	GLU	A	271	14.419	41.382	56.567	1.00	40.86
ATOM	2110	O	GLU	A	271	14.087	40.285	56.107	1.00	42.02
ATOM	2111	CB	GLU	A	271	15.802	40.054	58.230	1.00	35.05
ATOM	2112	CG	GLU	A	271	14.607	39.218	58.760	1.00	33.55
ATOM	2113	CD	GLU	A	271	14.291	39.428	60.219	1.00	25.52
ATOM	2114	OE1	GLU	A	271	14.586	40.436	60.844	1.00	37.23
ATOM	2115	OE2	GLU	A	271	13.699	38.393	60.757	1.00	25.86
ATOM	2116	N	ASN	A	272	13.978	42.535	56.052	1.00	35.34
ATOM	2117	CA	ASN	A	272	13.057	42.544	54.928	1.00	33.26
ATOM	2118	C	ASN	A	272	13.787	42.048	53.702	1.00	34.47
ATOM	2119	O	ASN	A	272	14.811	42.613	53.351	1.00	33.64
ATOM	2120	CB	ASN	A	272	12.441	43.947	54.719	1.00	30.65
ATOM	2121	CG	ASN	A	272	11.667	44.453	55.935	1.00	42.50
ATOM	2122	OD1	ASN	A	272	11.908	45.554	56.475	1.00	47.09
ATOM	2123	ND2	ASN	A	272	10.716	43.661	56.371	1.00	24.31
ATOM	2124	N	PRO	A	273	13.281	40.983	53.078	1.00	29.63
ATOM	2125	CA	PRO	A	273	13.935	40.373	51.910	1.00	28.47
ATOM	2126	C	PRO	A	273	14.303	41.345	50.819	1.00	30.43
ATOM	2127	O	PRO	A	273	13.457	42.089	50.372	1.00	31.65
ATOM	2128	CB	PRO	A	273	12.991	39.305	51.381	1.00	30.16
ATOM	2129	CG	PRO	A	273	11.829	39.237	52.365	1.00	36.65
ATOM	2130	CD	PRO	A	273	11.927	40.440	53.310	1.00	30.84
ATOM	2131	N	CYS	A	274	15.571	41.333	50.431	1.00	27.40
ATOM	2132	CA	CYS	A	274	16.069	42.206	49.373	1.00	28.17
ATOM	2133	C	CYS	A	274	16.327	43.604	49.860	1.00	27.35
ATOM	2134	O	CYS	A	274	17.114	44.345	49.248	1.00	28.53
ATOM	2135	CB	CYS	A	274	15.121	42.347	48.145	1.00	32.00
ATOM	2136	SG	CYS	A	274	14.659	40.798	47.340	1.00	38.42
ATOM	2137	N	LEU	A	275	15.658	43.972	50.947	1.00	26.20
ATOM	2138	CA	LEU	A	275	15.789	45.315	51.535	1.00	29.54
ATOM	2139	C	LEU	A	275	15.857	45.279	53.059	1.00	32.52
ATOM	2140	O	LEU	A	275	14.859	45.250	53.772	1.00	32.44
ATOM	2141	CB	LEU	A	275	14.657	46.253	51.005	1.00	28.58
ATOM	2142	CG	LEU	A	275	14.847	47.735	51.239	1.00	26.78
ATOM	2143	CD1	LEU	A	275	16.191	48.183	50.698	1.00	21.90
ATOM	2144	CD2	LEU	A	275	13.712	48.478	50.554	1.00	31.48
ATOM	2145	N	THR	A	276	17.062	45.244	53.570	1.00	29.67
ATOM	2146	CA	THR	A	276	17.225	45.198	54.996	1.00	30.47
ATOM	2147	C	THR	A	276	17.120	46.624	55.597	1.00	34.60
ATOM	2148	O	THR	A	276	17.766	47.588	55.129	1.00	31.01
ATOM	2149	CB	THR	A	276	18.508	44.397	55.387	1.00	30.98
ATOM	2150	OG1	THR	A	276	18.224	43.030	55.512	1.00	42.01
ATOM	2151	CG2	THR	A	276	19.124	44.835	56.694	1.00	29.43
ATOM	2152	N	PHE	A	277	16.280	46.759	56.622	1.00	27.69
ATOM	2153	CA	PHE	A	277	16.164	48.034	57.274	1.00	28.92
ATOM	2154	C	PHE	A	277	17.184	48.065	58.403	1.00	36.07
ATOM	2155	O	PHE	A	277	17.337	47.088	59.131	1.00	34.57
ATOM	2156	CB	PHE	A	277	14.791	48.265	57.901	1.00	30.17
ATOM	2157	CG	PHE	A	277	13.774	48.458	56.848	1.00	30.72
ATOM	2158	CD1	PHE	A	277	14.011	47.966	55.568	1.00	30.73
ATOM	2159	CD2	PHE	A	277	12.573	49.114	57.105	1.00	30.61
ATOM	2160	CE1	PHE	A	277	13.072	48.135	54.552	1.00	29.30
ATOM	2161	CE2	PHE	A	277	11.619	49.276	56.101	1.00	32.26
ATOM	2162	CZ	PHE	A	277	11.862	48.772	54.824	1.00	27.48
ATOM	2163	N	VAL	A	278	17.864	49.186	58.562	1.00	32.97
ATOM	2164	CA	VAL	A	278	18.839	49.338	59.614	1.00	32.66
ATOM	2165	C	VAL	A	278	18.696	50.698	60.248	1.00	37.01
ATOM	2166	O	VAL	A	278	18.251	51.635	59.599	1.00	37.16

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ATOM   2167  CB  VAL A 278      20.246  49.088  59.109  1.00 36.51
ATOM   2168  CG1 VAL A 278      20.173  47.967  58.086  1.00 37.40
ATOM   2169  CG2 VAL A 278      20.791  50.356  58.444  1.00 34.87
ATOM   2170  N   THR A 279      19.066  50.778  61.515  1.00 32.36
ATOM   2171  CA  THR A 279      18.948  51.994  62.264  1.00 31.03
ATOM   2172  C   THR A 279      20.121  52.883  62.035  1.00 37.42
ATOM   2173  O   THR A 279      21.243  52.397  61.920  1.00 39.87
ATOM   2174  CB  THR A 279      18.885  51.695  63.759  1.00 31.39
ATOM   2175  OG1 THR A 279      19.110  52.895  64.472  1.00 34.21
ATOM   2176  CG2 THR A 279      19.989  50.706  64.083  1.00 23.69
ATOM   2177  N   PRO A 280      19.845  54.187  62.000  1.00 30.07
ATOM   2178  CA  PRO A 280      20.903  55.132  61.802  1.00 27.00
ATOM   2179  C   PRO A 280      21.823  55.110  63.005  1.00 30.60
ATOM   2180  O   PRO A 280      22.951  55.588  62.934  1.00 30.20
ATOM   2181  CB  PRO A 280      20.249  56.497  61.601  1.00 26.23
ATOM   2182  CG  PRO A 280      18.769  56.337  61.889  1.00 28.07
ATOM   2183  CD  PRO A 280      18.499  54.848  61.984  1.00 26.11
ATOM   2184  N   THR A 281      21.348  54.509  64.112  1.00 27.82
ATOM   2185  CA  THR A 281      22.199  54.426  65.302  1.00 27.48
ATOM   2186  C   THR A 281      23.372  53.523  65.073  1.00 31.37
ATOM   2187  O   THR A 281      24.226  53.385  65.944  1.00 31.93
ATOM   2188  CB  THR A 281      21.499  54.016  66.601  1.00 21.45
ATOM   2189  OG1 THR A 281      21.021  52.681  66.524  1.00 33.18
ATOM   2190  CG2 THR A 281      20.388  54.994  66.874  1.00  9.89
ATOM   2191  N   LEU A 282      23.378  52.881  63.913  1.00 25.29
ATOM   2192  CA  LEU A 282      24.473  51.993  63.586  1.00 24.04
ATOM   2193  C   LEU A 282      25.682  52.790  63.049  1.00 34.74
ATOM   2194  O   LEU A 282      26.787  52.279  62.884  1.00 34.84
ATOM   2195  CB  LEU A 282      24.063  51.038  62.464  1.00 22.14
ATOM   2196  CG  LEU A 282      23.104  49.916  62.819  1.00 26.88
ATOM   2197  CD1 LEU A 282      23.312  48.809  61.791  1.00 27.77
ATOM   2198  CD2 LEU A 282      23.322  49.404  64.249  1.00 21.75
ATOM   2199  N   LEU A 283      25.465  54.063  62.744  1.00 32.05
ATOM   2200  CA  LEU A 283      26.501  54.903  62.159  1.00 31.43
ATOM   2201  C   LEU A 283      27.659  55.324  63.055  1.00 41.94
ATOM   2202  O   LEU A 283      27.907  56.525  63.196  1.00 49.19
ATOM   2203  CB  LEU A 283      25.861  56.117  61.418  1.00 29.55
ATOM   2204  CG  LEU A 283      24.720  55.661  60.488  1.00 32.94
ATOM   2205  CD1 LEU A 283      23.933  56.811  59.869  1.00 33.48
ATOM   2206  CD2 LEU A 283      25.232  54.716  59.409  1.00 28.39
ATOM   2207  N   ALA A 284      28.387  54.370  63.638  1.00 33.18
ATOM   2208  CA  ALA A 284      29.488  54.728  64.532  1.00 30.20
ATOM   2209  C   ALA A 284      30.655  55.492  63.922  1.00 31.97
ATOM   2210  O   ALA A 284      31.411  56.165  64.642  1.00 31.40
ATOM   2211  CB  ALA A 284      29.973  53.544  65.336  1.00 29.60
ATOM   2212  N   GLY A 285      30.801  55.371  62.605  1.00 27.10
ATOM   2213  CA  GLY A 285      31.882  56.018  61.867  1.00 29.77
ATOM   2214  C   GLY A 285      33.174  55.194  61.910  1.00 39.25
ATOM   2215  O   GLY A 285      34.264  55.649  61.544  1.00 41.21
ATOM   2216  N   ASP A 286      33.022  53.951  62.363  1.00 34.57
ATOM   2217  CA  ASP A 286      34.144  53.057  62.473  1.00 32.57
ATOM   2218  C   ASP A 286      33.805  51.625  62.130  1.00 31.59
ATOM   2219  O   ASP A 286      34.609  50.743  62.325  1.00 29.27
ATOM   2220  CB  ASP A 286      34.812  53.163  63.860  1.00 34.65
ATOM   2221  CG  ASP A 286      34.081  52.447  64.945  1.00 41.93
ATOM   2222  OD1 ASP A 286      33.008  51.893  64.765  1.00 45.21
ATOM   2223  OD2 ASP A 286      34.714  52.492  66.087  1.00 35.67
ATOM   2224  N   LYS A 287      32.590  51.395  61.641  1.00 29.46
ATOM   2225  CA  LYS A 287      32.199  50.038  61.272  1.00 31.62
ATOM   2226  C   LYS A 287      31.976  49.060  62.437  1.00 37.91
ATOM   2227  O   LYS A 287      31.761  47.879  62.240  1.00 37.91
ATOM   2228  CB  LYS A 287      33.215  49.447  60.304  1.00 32.17
ATOM   2229  CG  LYS A 287      33.510  50.358  59.119  1.00 51.60
ATOM   2230  CD  LYS A 287      33.960  49.601  57.877  1.00 50.74
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ATOM	2231	CE	LYS	A	287	35.290	50.105	57.328	1.00 63.80
ATOM	2232	NZ	LYS	A	287	35.167	50.866	56.069	1.00 71.91
ATOM	2233	N	SER	A	288	32.168	49.575	63.647	1.00 31.58
ATOM	2234	CA	SER	A	288	32.079	48.737	64.810	1.00 27.15
ATOM	2235	C	SER	A	288	30.742	48.137	65.142	1.00 36.08
ATOM	2236	O	SER	A	288	30.676	47.318	66.057	1.00 37.87
ATOM	2237	CB	SER	A	288	32.618	49.463	66.005	1.00 16.31
ATOM	2238	OG	SER	A	288	31.659	50.443	66.312	1.00 29.71
ATOM	2239	N	LEU	A	289	29.669	48.529	64.460	1.00 29.34
ATOM	2240	CA	LEU	A	289	28.351	47.979	64.794	1.00 24.70
ATOM	2241	C	LEU	A	289	27.792	47.105	63.686	1.00 32.97
ATOM	2242	O	LEU	A	289	26.591	46.766	63.648	1.00 30.35
ATOM	2243	CB	LEU	A	289	27.385	49.090	65.191	1.00 21.45
ATOM	2244	CG	LEU	A	289	27.954	49.887	66.347	1.00 22.99
ATOM	2245	CD1	LEU	A	289	26.881	50.769	66.950	1.00 20.66
ATOM	2246	CD2	LEU	A	289	28.381	48.881	67.394	1.00 29.65
ATOM	2247	N	SER	A	290	28.723	46.753	62.801	1.00 31.21
ATOM	2248	CA	SER	A	290	28.453	45.941	61.645	1.00 29.89
ATOM	2249	C	SER	A	290	27.861	44.582	62.006	1.00 30.57
ATOM	2250	O	SER	A	290	27.299	43.872	61.153	1.00 29.73
ATOM	2251	CB	SER	A	290	29.704	45.800	60.783	1.00 29.27
ATOM	2252	OG	SER	A	290	30.470	44.725	61.266	1.00 38.77
ATOM	2253	N	ASN	A	291	27.980	44.207	63.282	1.00 26.55
ATOM	2254	CA	ASN	A	291	27.449	42.909	63.706	1.00 25.78
ATOM	2255	C	ASN	A	291	26.006	42.773	63.355	1.00 30.89
ATOM	2256	O	ASN	A	291	25.576	41.702	62.975	1.00 29.73
ATOM	2257	CB	ASN	A	291	27.725	42.503	65.157	1.00 28.48
ATOM	2258	CG	ASN	A	291	26.910	43.313	66.119	1.00 33.33
ATOM	2259	OD1	ASN	A	291	27.065	44.529	66.198	1.00 34.48
ATOM	2260	ND2	ASN	A	291	26.001	42.653	66.818	1.00 28.96
ATOM	2261	N	VAL	A	292	25.277	43.885	63.476	1.00 30.68
ATOM	2262	CA	VAL	A	292	23.865	43.924	63.142	1.00 30.27
ATOM	2263	C	VAL	A	292	23.667	43.619	61.669	1.00 32.61
ATOM	2264	O	VAL	A	292	22.644	43.082	61.255	1.00 33.31
ATOM	2265	CB	VAL	A	292	23.288	45.289	63.505	1.00 35.13
ATOM	2266	CG1	VAL	A	292	21.877	45.486	62.946	1.00 33.48
ATOM	2267	CG2	VAL	A	292	23.328	45.478	65.014	1.00 35.02
ATOM	2268	N	ILE	A	293	24.653	43.975	60.861	1.00 27.92
ATOM	2269	CA	ILE	A	293	24.527	43.685	59.461	1.00 28.71
ATOM	2270	C	ILE	A	293	24.658	42.159	59.296	1.00 35.03
ATOM	2271	O	ILE	A	293	23.860	41.475	58.624	1.00 38.34
ATOM	2272	CB	ILE	A	293	25.554	44.438	58.606	1.00 33.84
ATOM	2273	CG1	ILE	A	293	25.608	45.952	58.898	1.00 34.55
ATOM	2274	CG2	ILE	A	293	25.305	44.186	57.121	1.00 36.50
ATOM	2275	CD1	ILE	A	293	24.265	46.680	58.808	1.00 30.49
ATOM	2276	N	ALA	A	294	25.668	41.584	59.934	1.00 23.76
ATOM	2277	CA	ALA	A	294	25.836	40.138	59.809	1.00 19.95
ATOM	2278	C	ALA	A	294	24.559	39.409	60.165	1.00 27.33
ATOM	2279	O	ALA	A	294	24.183	38.422	59.505	1.00 25.48
ATOM	2280	CB	ALA	A	294	26.984	39.644	60.688	1.00 19.24
ATOM	2281	N	HIS	A	295	23.917	39.934	61.244	1.00 27.63
ATOM	2282	CA	HIS	A	295	22.666	39.414	61.797	1.00 26.83
ATOM	2283	C	HIS	A	295	21.611	39.383	60.734	1.00 28.61
ATOM	2284	O	HIS	A	295	21.169	38.301	60.348	1.00 25.72
ATOM	2285	CB	HIS	A	295	22.148	40.175	63.028	1.00 27.98
ATOM	2286	CG	HIS	A	295	20.937	39.534	63.657	1.00 31.62
ATOM	2287	ND1	HIS	A	295	21.047	38.675	64.763	1.00 32.66
ATOM	2288	CD2	HIS	A	295	19.602	39.643	63.338	1.00 30.92
ATOM	2289	CE1	HIS	A	295	19.802	38.298	65.088	1.00 30.14
ATOM	2290	NE2	HIS	A	295	18.916	38.860	64.254	1.00 30.24
ATOM	2291	N	GLU	A	296	21.257	40.590	60.251	1.00 27.23
ATOM	2292	CA	GLU	A	296	20.266	40.749	59.195	1.00 25.98
ATOM	2293	C	GLU	A	296	20.533	39.790	58.056	1.00 32.73
ATOM	2294	O	GLU	A	296	19.628	39.081	57.561	1.00 31.88

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ATOM   2295  CB  GLU A 296      20.046  42.203  58.728  1.00 24.55
ATOM   2296  CG  GLU A 296      19.892  43.148  59.936  1.00 23.16
ATOM   2297  CD  GLU A 296      18.939  42.632  60.991  1.00 53.50
ATOM   2298  OE1 GLU A 296      17.964  41.956  60.700  1.00 23.99
ATOM   2299  OE2 GLU A 296      19.237  43.006  62.233  1.00 32.77
ATOM   2300  N   ILE A 297      21.803  39.745  57.675  1.00 25.37
ATOM   2301  CA  ILE A 297      22.195  38.870  56.599  1.00 22.64
ATOM   2302  C   ILE A 297      21.812  37.445  56.859  1.00 27.47
ATOM   2303  O   ILE A 297      21.175  36.799  56.048  1.00 26.25
ATOM   2304  CB  ILE A 297      23.672  38.963  56.302  1.00 24.19
ATOM   2305  CG1 ILE A 297      23.920  40.140  55.355  1.00 25.28
ATOM   2306  CG2 ILE A 297      24.079  37.686  55.626  1.00 20.77
ATOM   2307  CD1 ILE A 297      25.325  40.705  55.435  1.00 16.26
ATOM   2308  N   SER A 298      22.226  36.947  58.012  1.00 28.23
ATOM   2309  CA  SER A 298      21.939  35.569  58.377  1.00 25.04
ATOM   2310  C   SER A 298      20.467  35.235  58.298  1.00 26.21
ATOM   2311  O   SER A 298      20.118  34.097  58.000  1.00 26.30
ATOM   2312  CB  SER A 298      22.520  35.209  59.714  1.00 27.82
ATOM   2313  OG  SER A 298      23.890  35.552  59.714  1.00 35.98
ATOM   2314  N   HIS A 299      19.599  36.230  58.562  1.00 22.17
ATOM   2315  CA  HIS A 299      18.205  36.092  58.719  1.00 22.77
ATOM   2316  C   HIS A 299      17.614  35.710  57.387  1.00 29.10
ATOM   2317  O   HIS A 299      16.553  35.162  57.290  1.00 31.50
ATOM   2318  CB  HIS A 299      17.662  37.432  59.200  1.00 24.67
ATOM   2319  CG  HIS A 299      17.053  37.338  60.602  1.00 29.10
ATOM   2320  ND1 HIS A 299      16.190  36.368  60.975  1.00 30.70
ATOM   2321  CD2 HIS A 299      17.196  38.233  61.667  1.00 32.39
ATOM   2322  CE1 HIS A 299      15.811  36.675  62.233  1.00 30.41
ATOM   2323  NE2 HIS A 299      16.397  37.783  62.674  1.00 31.74
ATOM   2324  N   SER A 300      18.356  36.048  56.315  1.00 23.31
ATOM   2325  CA  SER A 300      17.942  35.581  55.010  1.00 24.24
ATOM   2326  C   SER A 300      17.879  34.050  54.977  1.00 34.13
ATOM   2327  O   SER A 300      17.075  33.463  54.305  1.00 33.28
ATOM   2328  CB  SER A 300      18.941  36.092  53.965  1.00 27.31
ATOM   2329  OG  SER A 300      18.947  37.519  53.962  1.00 49.96
ATOM   2330  N   TRP A 301      18.773  33.411  55.752  1.00 33.09
ATOM   2331  CA  TRP A 301      18.702  31.969  55.829  1.00 31.84
ATOM   2332  C   TRP A 301      17.740  31.511  56.895  1.00 32.15
ATOM   2333  O   TRP A 301      16.764  30.876  56.620  1.00 27.05
ATOM   2334  CB  TRP A 301      20.095  31.429  56.082  1.00 30.16
ATOM   2335  CG  TRP A 301      20.791  31.421  54.801  1.00 32.02
ATOM   2336  CD1 TRP A 301      20.787  30.393  53.859  1.00 35.05
ATOM   2337  CD2 TRP A 301      21.496  32.520  54.202  1.00 30.84
ATOM   2338  NE1 TRP A 301      21.415  30.732  52.722  1.00 33.29
ATOM   2339  CE2 TRP A 301      21.886  32.112  52.921  1.00 33.44
ATOM   2340  CE3 TRP A 301      21.811  33.790  54.631  1.00 32.65
ATOM   2341  CZ2 TRP A 301      22.577  32.970  52.108  1.00 32.21
ATOM   2342  CZ3 TRP A 301      22.503  34.652  53.812  1.00 36.10
ATOM   2343  CH2 TRP A 301      22.888  34.239  52.544  1.00 36.83
ATOM   2344  N   THR A 302      18.042  31.864  58.146  1.00 31.77
ATOM   2345  CA  THR A 302      17.125  31.488  59.215  1.00 33.55
ATOM   2346  C   THR A 302      16.276  32.690  59.695  1.00 36.35
ATOM   2347  O   THR A 302      16.759  33.590  60.330  1.00 36.56
ATOM   2348  CB  THR A 302      17.963  30.920  60.366  1.00 31.04
ATOM   2349  OG1 THR A 302      19.047  31.807  60.639  1.00 38.50
ATOM   2350  CG2 THR A 302      18.544  29.555  59.967  1.00 17.10
ATOM   2351  N   GLY A 303      15.053  32.418  59.250  1.00 25.28
ATOM   2352  CA  GLY A 303      13.908  33.236  59.483  1.00 21.59
ATOM   2353  C   GLY A 303      13.202  33.382  58.163  1.00 26.99
ATOM   2354  O   GLY A 303      12.040  33.040  57.994  1.00 26.18
ATOM   2355  N   ASN A 304      13.936  33.891  57.195  1.00 28.05
ATOM   2356  CA  ASN A 304      13.363  34.101  55.875  1.00 28.17
ATOM   2357  C   ASN A 304      13.141  32.839  55.056  1.00 28.99
ATOM   2358  O   ASN A 304      12.118  32.715  54.415  1.00 24.87
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ATOM   2359  CB  ASN A 304      14.091  35.176  55.047  1.00 23.55
ATOM   2360  CG  ASN A 304      14.133  36.499  55.757  1.00 37.80
ATOM   2361  OD1 ASN A 304      13.630  36.613  56.892  1.00 20.66
ATOM   2362  ND2 ASN A 304      14.752  37.488  55.093  1.00 24.17
ATOM   2363  N   LEU A 305      14.110  31.919  55.055  1.00 27.24
ATOM   2364  CA  LEU A 305      13.987  30.677  54.306  1.00 27.34
ATOM   2365  C   LEU A 305      13.218  29.665  55.121  1.00 31.29
ATOM   2366  O   LEU A 305      12.235  29.051  54.678  1.00 29.23
ATOM   2367  CB  LEU A 305      15.371  30.119  53.967  1.00 27.62
ATOM   2368  CG  LEU A 305      15.805  30.593  52.603  1.00 32.23
ATOM   2369  CD1 LEU A 305      17.289  30.293  52.412  1.00 28.91
ATOM   2370  CD2 LEU A 305      14.951  29.887  51.549  1.00 41.51
ATOM   2371  N   VAL A 306      13.711  29.528  56.347  1.00 27.75
ATOM   2372  CA  VAL A 306      13.134  28.652  57.327  1.00 29.99
ATOM   2373  C   VAL A 306      12.578  29.527  58.403  1.00 31.78
ATOM   2374  O   VAL A 306      13.306  30.217  59.110  1.00 28.32
ATOM   2375  CB  VAL A 306      14.092  27.593  57.827  1.00 37.24
ATOM   2376  CG1 VAL A 306      15.479  28.180  57.969  1.00 38.36
ATOM   2377  CG2 VAL A 306      13.602  27.107  59.164  1.00 37.56
ATOM   2378  N   THR A 307      11.259  29.517  58.440  1.00 29.40
ATOM   2379  CA  THR A 307      10.499  30.358  59.320  1.00 28.14
ATOM   2380  C   THR A 307       9.729  29.712  60.446  1.00 34.06
ATOM   2381  O   THR A 307       9.029  28.706  60.277  1.00 36.72
ATOM   2382  CB  THR A 307       9.474  31.115  58.460  1.00 23.03
ATOM   2383  OG1 THR A 307      10.124  31.811  57.422  1.00 28.56
ATOM   2384  CG2 THR A 307       8.665  32.068  59.336  1.00 12.55
ATOM   2385  N   ASN A 308       9.802  30.347  61.608  1.00 29.29
ATOM   2386  CA  ASN A 308       9.042  29.862  62.724  1.00 27.82
ATOM   2387  C   ASN A 308       7.576  29.716  62.234  1.00 31.42
ATOM   2388  O   ASN A 308       7.072  30.535  61.450  1.00 32.96
ATOM   2389  CB  ASN A 308       9.194  30.790  63.972  1.00 23.57
ATOM   2390  CG  ASN A 308       8.935  32.298  63.745  1.00 30.38
ATOM   2391  OD1 ASN A 308       9.505  33.190  64.400  1.00 23.70
ATOM   2392  ND2 ASN A 308       8.056  32.608  62.818  1.00 41.34
ATOM   2393  N   LYS A 309       6.890  28.658  62.640  1.00 24.10
ATOM   2394  CA  LYS A 309       5.502  28.433  62.230  1.00 23.40
ATOM   2395  C   LYS A 309       4.514  29.380  62.964  1.00 28.17
ATOM   2396  O   LYS A 309       3.430  29.756  62.474  1.00 22.88
ATOM   2397  CB  LYS A 309       5.151  26.975  62.459  1.00 24.26
ATOM   2398  CG  LYS A 309       4.036  26.478  61.555  1.00 28.57
ATOM   2399  CD  LYS A 309       3.543  25.075  61.924  1.00 38.25
ATOM   2400  CE  LYS A 309       3.475  24.112  60.739  1.00 78.39
ATOM   2401  NZ  LYS A 309       4.389  22.953  60.849  1.00 98.22
ATOM   2402  N   THR A 310       4.917  29.744  64.179  1.00 23.46
ATOM   2403  CA  THR A 310       4.179  30.616  65.037  1.00 22.98
ATOM   2404  C   THR A 310       5.142  31.336  65.922  1.00 31.43
ATOM   2405  O   THR A 310       6.223  30.836  66.230  1.00 31.51
ATOM   2406  CB  THR A 310       3.104  29.917  65.871  1.00 34.01
ATOM   2407  OG1 THR A 310       3.684  29.148  66.945  1.00 27.97
ATOM   2408  CG2 THR A 310       2.174  29.114  64.956  1.00 24.58
ATOM   2409  N   TRP A 311       4.733  32.527  66.299  1.00 29.82
ATOM   2410  CA  TRP A 311       5.559  33.371  67.120  1.00 30.49
ATOM   2411  C   TRP A 311       6.044  32.692  68.381  1.00 26.99
ATOM   2412  O   TRP A 311       7.015  33.101  68.971  1.00 25.15
ATOM   2413  CB  TRP A 311       4.933  34.768  67.320  1.00 30.34
ATOM   2414  CG  TRP A 311       4.706  35.412  66.001  1.00 30.63
ATOM   2415  CD1 TRP A 311       3.514  35.785  65.490  1.00 32.07
ATOM   2416  CD2 TRP A 311       5.705  35.723  65.008  1.00 31.31
ATOM   2417  NE1 TRP A 311       3.703  36.335  64.250  1.00 29.97
ATOM   2418  CE2 TRP A 311       5.033  36.317  63.931  1.00 32.88
ATOM   2419  CE3 TRP A 311       7.099  35.586  64.943  1.00 31.44
ATOM   2420  CZ2 TRP A 311       5.721  36.771  62.804  1.00 31.56
ATOM   2421  CZ3 TRP A 311       7.779  36.059  63.848  1.00 30.39
ATOM   2422  CH2 TRP A 311       7.089  36.639  62.789  1.00 30.58
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ATOM   2423  N   ASP A 312       5.366  31.632  68.770  1.00 27.36
ATOM   2424  CA  ASP A 312       5.757  30.868  69.950  1.00 27.38
ATOM   2425  C   ASP A 312       7.149  30.213  69.757  1.00 31.25
ATOM   2426  O   ASP A 312       7.826  29.802  70.718  1.00 27.07
ATOM   2427  CB  ASP A 312       4.697  29.750  70.217  1.00 25.96
ATOM   2428  CG  ASP A 312       3.432  30.230  70.872  1.00 27.42
ATOM   2429  OD1 ASP A 312       3.197  31.396  71.102  1.00 28.97
ATOM   2430  OD2 ASP A 312       2.623  29.265  71.208  1.00 29.33
ATOM   2431  N   HIS A 313       7.562  30.089  68.487  1.00 25.04
ATOM   2432  CA  HIS A 313       8.820  29.454  68.164  1.00 23.48
ATOM   2433  C   HIS A 313       9.864  30.452  67.737  1.00 25.38
ATOM   2434  O   HIS A 313      10.929  30.139  67.214  1.00 29.97
ATOM   2435  CB  HIS A 313       8.588  28.245  67.209  1.00 25.00
ATOM   2436  CG  HIS A 313       7.641  27.230  67.837  1.00 29.77
ATOM   2437  ND1 HIS A 313       8.087  26.183  68.635  1.00 31.37
ATOM   2438  CD2 HIS A 313       6.279  27.152  67.808  1.00 31.31
ATOM   2439  CE1 HIS A 313       7.015  25.509  69.039  1.00 28.91
ATOM   2440  NE2 HIS A 313       5.913  26.066  68.559  1.00 29.40
ATOM   2441  N   PHE A 314       9.521  31.682  68.005  1.00 17.43
ATOM   2442  CA  PHE A 314      10.345  32.810  67.701  1.00 17.16
ATOM   2443  C   PHE A 314      11.852  32.523  67.812  1.00 26.01
ATOM   2444  O   PHE A 314      12.669  32.922  66.963  1.00 30.40
ATOM   2445  CB  PHE A 314       9.908  34.056  68.517  1.00 18.63
ATOM   2446  CG  PHE A 314      10.592  35.351  68.113  1.00 20.10
ATOM   2447  CD1 PHE A 314      10.712  35.697  66.768  1.00 21.80
ATOM   2448  CD2 PHE A 314      11.129  36.214  69.070  1.00 22.60
ATOM   2449  CE1 PHE A 314      11.337  36.890  66.400  1.00 24.74
ATOM   2450  CE2 PHE A 314      11.750  37.416  68.716  1.00 27.24
ATOM   2451  CZ  PHE A 314      11.857  37.756  67.368  1.00 24.97
ATOM   2452  N   TRP A 315      12.235  31.828  68.861  1.00 19.66
ATOM   2453  CA  TRP A 315      13.639  31.541  69.068  1.00 17.87
ATOM   2454  C   TRP A 315      14.292  30.775  67.953  1.00 28.55
ATOM   2455  O   TRP A 315      15.518  30.769  67.830  1.00 29.23
ATOM   2456  CB  TRP A 315      13.860  30.842  70.362  1.00 16.03
ATOM   2457  CG  TRP A 315      13.613  29.408  70.161  1.00 19.64
ATOM   2458  CD1 TRP A 315      12.428  28.787  70.247  1.00 22.39
ATOM   2459  CD2 TRP A 315      14.599  28.430  69.876  1.00 21.70
ATOM   2460  NE1 TRP A 315      12.597  27.457  70.033  1.00 24.22
ATOM   2461  CE2 TRP A 315      13.934  27.205  69.801  1.00 27.96
ATOM   2462  CE3 TRP A 315      15.976  28.481  69.681  1.00 22.89
ATOM   2463  CZ2 TRP A 315      14.631  26.018  69.547  1.00 27.76
ATOM   2464  CZ3 TRP A 315      16.651  27.321  69.421  1.00 23.16
ATOM   2465  CH2 TRP A 315      15.991  26.108  69.341  1.00 23.94
ATOM   2466  N   LEU A 316      13.488  30.114  67.144  1.00 26.33
ATOM   2467  CA  LEU A 316      14.092  29.400  66.067  1.00 25.44
ATOM   2468  C   LEU A 316      14.666  30.443  65.129  1.00 33.21
ATOM   2469  O   LEU A 316      15.737  30.252  64.530  1.00 37.80
ATOM   2470  CB  LEU A 316      13.050  28.567  65.311  1.00 24.82
ATOM   2471  CG  LEU A 316      12.663  27.242  65.956  1.00 27.62
ATOM   2472  CD1 LEU A 316      11.574  26.552  65.106  1.00 22.30
ATOM   2473  CD2 LEU A 316      13.897  26.344  66.097  1.00 27.03
ATOM   2474  N   ASN A 317      13.931  31.555  64.997  1.00 20.55
ATOM   2475  CA  ASN A 317      14.354  32.624  64.115  1.00 19.34
ATOM   2476  C   ASN A 317      15.603  33.333  64.531  1.00 30.38
ATOM   2477  O   ASN A 317      16.553  33.425  63.766  1.00 32.04
ATOM   2478  CB  ASN A 317      13.273  33.682  63.838  1.00 14.82
ATOM   2479  CG  ASN A 317      12.330  33.177  62.793  1.00 31.14
ATOM   2480  OD1 ASN A 317      12.151  31.966  62.657  1.00 38.42
ATOM   2481  ND2 ASN A 317      11.724  34.074  62.049  1.00 17.34
ATOM   2482  N   GLU A 318      15.562  33.870  65.750  1.00 26.15
ATOM   2483  CA  GLU A 318      16.624  34.648  66.358  1.00 20.23
ATOM   2484  C   GLU A 318      17.860  33.884  66.816  1.00 23.53
ATOM   2485  O   GLU A 318      19.006  34.273  66.554  1.00 26.34
ATOM   2486  CB  GLU A 318      15.998  35.484  67.456  1.00 19.11
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ATOM   2487  CG  GLU A 318      14.999  36.480  66.800  1.00 24.06
ATOM   2488  CD  GLU A 318      15.615  37.391  65.758  1.00 40.32
ATOM   2489  OE1 GLU A 318      16.833  37.559  65.612  1.00 21.24
ATOM   2490  OE2 GLU A 318      14.703  38.025  65.062  1.00 24.23
ATOM   2491  N   GLY A 319      17.621  32.782  67.494  1.00 17.17
ATOM   2492  CA  GLY A 319      18.681  31.955  68.016  1.00 15.31
ATOM   2493  C   GLY A 319      19.673  31.601  66.953  1.00 24.07
ATOM   2494  O   GLY A 319      20.860  31.897  67.080  1.00 28.47
ATOM   2495  N   HIS A 320      19.165  30.956  65.907  1.00 20.24
ATOM   2496  CA  HIS A 320      19.977  30.556  64.790  1.00 20.13
ATOM   2497  C   HIS A 320      20.678  31.759  64.142  1.00 24.97
ATOM   2498  O   HIS A 320      21.855  31.700  63.739  1.00 23.54
ATOM   2499  CB  HIS A 320      19.143  29.737  63.791  1.00 20.57
ATOM   2500  CG  HIS A 320      18.662  28.426  64.349  1.00 22.57
ATOM   2501  ND1 HIS A 320      17.471  28.332  65.058  1.00 22.98
ATOM   2502  CD2 HIS A 320      19.217  27.176  64.286  1.00 19.52
ATOM   2503  CE1 HIS A 320      17.336  27.046  65.385  1.00 19.18
ATOM   2504  NE2 HIS A 320      18.368  26.329  64.952  1.00 18.12
ATOM   2505  N   THR A 321      19.958  32.875  64.053  1.00 21.61
ATOM   2506  CA  THR A 321      20.543  34.056  63.478  1.00 22.16
ATOM   2507  C   THR A 321      21.697  34.552  64.342  1.00 27.47
ATOM   2508  O   THR A 321      22.789  34.825  63.836  1.00 26.64
ATOM   2509  CB  THR A 321      19.470  35.097  63.113  1.00 27.88
ATOM   2510  OG1 THR A 321      18.403  34.392  62.523  1.00 27.92
ATOM   2511  CG2 THR A 321      19.999  36.088  62.087  1.00 18.05
ATOM   2512  N   VAL A 322      21.496  34.634  65.659  1.00 21.90
ATOM   2513  CA  VAL A 322      22.610  35.054  66.470  1.00 19.44
ATOM   2514  C   VAL A 322      23.762  34.071  66.285  1.00 24.43
ATOM   2515  O   VAL A 322      24.926  34.414  66.188  1.00 21.48
ATOM   2516  CB  VAL A 322      22.218  35.185  67.928  1.00 20.92
ATOM   2517  CG1 VAL A 322      23.406  35.644  68.772  1.00 18.37
ATOM   2518  CG2 VAL A 322      21.093  36.200  68.048  1.00 20.01
ATOM   2519  N   TYR A 323      23.427  32.811  66.197  1.00 27.08
ATOM   2520  CA  TYR A 323      24.446  31.803  66.013  1.00 26.26
ATOM   2521  C   TYR A 323      25.222  32.036  64.728  1.00 28.26
ATOM   2522  O   TYR A 323      26.431  31.894  64.643  1.00 27.51
ATOM   2523  CB  TYR A 323      23.804  30.407  66.020  1.00 25.74
ATOM   2524  CG  TYR A 323      24.867  29.341  65.987  1.00 26.66
ATOM   2525  CD1 TYR A 323      25.539  28.957  67.150  1.00 29.09
ATOM   2526  CD2 TYR A 323      25.199  28.713  64.789  1.00 24.52
ATOM   2527  CE1 TYR A 323      26.530  27.974  67.157  1.00 22.56
ATOM   2528  CE2 TYR A 323      26.178  27.722  64.770  1.00 25.31
ATOM   2529  CZ  TYR A 323      26.846  27.370  65.944  1.00 29.19
ATOM   2530  OH  TYR A 323      27.823  26.434  65.895  1.00 27.51
ATOM   2531  N   LEU A 324      24.497  32.408  63.702  1.00 24.82
ATOM   2532  CA  LEU A 324      25.135  32.638  62.439  1.00 26.04
ATOM   2533  C   LEU A 324      25.832  33.952  62.417  1.00 30.92
ATOM   2534  O   LEU A 324      26.903  34.045  61.851  1.00 33.76
ATOM   2535  CB  LEU A 324      24.176  32.537  61.235  1.00 26.21
ATOM   2536  CG  LEU A 324      23.916  31.112  60.778  1.00 28.46
ATOM   2537  CD1 LEU A 324      22.752  31.109  59.791  1.00 28.95
ATOM   2538  CD2 LEU A 324      25.169  30.508  60.151  1.00 26.54
ATOM   2539  N   GLU A 325      25.234  34.976  63.033  1.00 27.04
ATOM   2540  CA  GLU A 325      25.870  36.303  63.064  1.00 22.88
ATOM   2541  C   GLU A 325      27.282  36.210  63.624  1.00 28.76
ATOM   2542  O   GLU A 325      28.250  36.722  63.026  1.00 26.24
ATOM   2543  CB  GLU A 325      25.016  37.365  63.759  1.00 22.01
ATOM   2544  CG  GLU A 325      25.827  38.411  64.524  1.00 41.55
ATOM   2545  CD  GLU A 325      25.035  39.040  65.646  1.00 72.11
ATOM   2546  OE1 GLU A 325      23.866  38.764  65.862  1.00 41.88
ATOM   2547  OE2 GLU A 325      25.719  39.922  66.350  1.00 67.15
ATOM   2548  N   ARG A 326      27.349  35.479  64.755  1.00 27.84
ATOM   2549  CA  ARG A 326      28.551  35.213  65.511  1.00 28.10
ATOM   2550  C   ARG A 326      29.604  34.457  64.771  1.00 30.90
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ATOM   2551  O   ARG A 326      30.763  34.747  64.976  1.00 33.93
ATOM   2552  CB  ARG A 326      28.334  34.761  66.947  1.00 31.52
ATOM   2553  CG  ARG A 326      27.645  35.864  67.726  1.00 22.20
ATOM   2554  CD  ARG A 326      27.462  35.572  69.203  1.00 28.71
ATOM   2555  NE  ARG A 326      26.727  36.673  69.830  1.00 23.82
ATOM   2556  CZ  ARG A 326      25.805  36.556  70.780  1.00 26.09
ATOM   2557  NH1 ARG A 326      25.443  35.388  71.305  1.00 23.16
ATOM   2558  NH2 ARG A 326      25.220  37.655  71.222  1.00 24.77
ATOM   2559  N   HIS A 327      29.221  33.511  63.918  1.00 29.85
ATOM   2560  CA  HIS A 327      30.207  32.777  63.120  1.00 30.52
ATOM   2561  C   HIS A 327      30.778  33.738  62.085  1.00 35.50
ATOM   2562  O   HIS A 327      31.966  33.777  61.822  1.00 36.74
ATOM   2563  CB  HIS A 327      29.591  31.555  62.407  1.00 31.59
ATOM   2564  CG  HIS A 327      29.764  30.259  63.176  1.00 34.51
ATOM   2565  ND1 HIS A 327      30.963  29.913  63.788  1.00 36.17
ATOM   2566  CD2 HIS A 327      28.875  29.263  63.432  1.00 35.58
ATOM   2567  CE1 HIS A 327      30.778  28.740  64.384  1.00 35.27
ATOM   2568  NE2 HIS A 327      29.532  28.322  64.191  1.00 35.56
ATOM   2569  N   ILE A 328      29.902  34.549  61.511  1.00 31.10
ATOM   2570  CA  ILE A 328      30.328  35.517  60.528  1.00 31.66
ATOM   2571  C   ILE A 328      31.416  36.407  61.086  1.00 40.12
ATOM   2572  O   ILE A 328      32.451  36.615  60.465  1.00 40.81
ATOM   2573  CB  ILE A 328      29.175  36.379  59.998  1.00 32.94
ATOM   2574  CG1 ILE A 328      28.220  35.570  59.114  1.00 29.53
ATOM   2575  CG2 ILE A 328      29.694  37.591  59.201  1.00 30.91
ATOM   2576  CD1 ILE A 328      27.119  36.463  58.535  1.00 32.98
ATOM   2577  N   CYS A 329      31.179  36.948  62.266  1.00 37.88
ATOM   2578  CA  CYS A 329      32.170  37.810  62.851  1.00 39.54
ATOM   2579  C   CYS A 329      33.475  37.092  63.157  1.00 40.19
ATOM   2580  O   CYS A 329      34.567  37.642  62.971  1.00 38.44
ATOM   2581  CB  CYS A 329      31.607  38.509  64.083  1.00 42.61
ATOM   2582  SG  CYS A 329      30.241  39.595  63.619  1.00 48.14
ATOM   2583  N   GLY A 330      33.332  35.852  63.632  1.00 34.74
ATOM   2584  CA  GLY A 330      34.471  35.030  63.980  1.00 35.20
ATOM   2585  C   GLY A 330      35.359  34.854  62.778  1.00 43.66
ATOM   2586  O   GLY A 330      36.581  34.857  62.891  1.00 46.79
ATOM   2587  N   ARG A 331      34.709  34.725  61.622  1.00 34.99
ATOM   2588  CA  ARG A 331      35.416  34.562  60.392  1.00 33.19
ATOM   2589  C   ARG A 331      36.086  35.863  60.017  1.00 40.63
ATOM   2590  O   ARG A 331      37.238  35.914  59.586  1.00 44.40
ATOM   2591  CB  ARG A 331      34.494  34.101  59.269  1.00 31.29
ATOM   2592  CG  ARG A 331      33.987  32.685  59.450  1.00 47.66
ATOM   2593  CD  ARG A 331      34.812  31.722  58.622  1.00 70.36
ATOM   2594  NE  ARG A 331      34.461  31.851  57.221  1.00 80.25
ATOM   2595  CZ  ARG A 331      33.615  31.023  56.628  1.00100.00
ATOM   2596  NH1 ARG A 331      33.055  29.999  57.279  1.00 79.12
ATOM   2597  NH2 ARG A 331      33.334  31.216  55.341  1.00 89.33
ATOM   2598  N   LEU A 332      35.342  36.926  60.172  1.00 32.14
ATOM   2599  CA  LEU A 332      35.885  38.198  59.820  1.00 30.02
ATOM   2600  C   LEU A 332      37.013  38.612  60.761  1.00 40.33
ATOM   2601  O   LEU A 332      38.084  38.972  60.286  1.00 40.10
ATOM   2602  CB  LEU A 332      34.772  39.262  59.822  1.00 28.20
ATOM   2603  CG  LEU A 332      34.451  39.896  58.469  1.00 28.82
ATOM   2604  CD1 LEU A 332      35.007  39.063  57.341  1.00 23.73
ATOM   2605  CD2 LEU A 332      32.947  40.114  58.306  1.00 29.76
ATOM   2606  N   PHE A 333      36.744  38.557  62.091  1.00 37.69
ATOM   2607  CA  PHE A 333      37.657  38.997  63.143  1.00 34.12
ATOM   2608  C   PHE A 333      38.251  37.956  64.035  1.00 37.99
ATOM   2609  O   PHE A 333      39.015  38.293  64.925  1.00 41.67
ATOM   2610  CB  PHE A 333      36.970  40.058  64.024  1.00 35.62
ATOM   2611  CG  PHE A 333      36.209  41.003  63.138  1.00 39.09
ATOM   2612  CD1 PHE A 333      36.887  41.923  62.332  1.00 43.22
ATOM   2613  CD2 PHE A 333      34.818  40.941  63.045  1.00 42.78
ATOM   2614  CE1 PHE A 333      36.205  42.781  61.464  1.00 44.14
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ATOM   2615  CE2 PHE A 333      34.123  41.806  62.194  1.00 46.56
ATOM   2616  CZ  PHE A 333      34.814  42.716  61.389  1.00 43.20
ATOM   2617  N   GLY A 334      37.908  36.706  63.865  1.00 34.36
ATOM   2618  CA  GLY A 334      38.507  35.705  64.763  1.00 32.89
ATOM   2619  C   GLY A 334      37.582  34.985  65.767  1.00 32.67
ATOM   2620  O   GLY A 334      36.641  35.540  66.340  1.00 33.48
ATOM   2621  N   GLU A 335      37.908  33.726  66.003  1.00 23.52
ATOM   2622  CA  GLU A 335      37.196  32.875  66.931  1.00 18.13
ATOM   2623  C   GLU A 335      37.278  33.384  68.346  1.00 29.15
ATOM   2624  O   GLU A 335      36.357  33.124  69.112  1.00 34.14
ATOM   2625  CB  GLU A 335      37.782  31.488  66.929  1.00 17.35
ATOM   2626  CG  GLU A 335      37.041  30.591  67.929  1.00 32.97
ATOM   2627  CD  GLU A 335      35.642  30.305  67.473  1.00 46.14
ATOM   2628  OE1 GLU A 335      35.093  30.944  66.588  1.00 39.31
ATOM   2629  OE2 GLU A 335      35.080  29.317  68.132  1.00 32.80
ATOM   2630  N   LYS A 336      38.370  34.077  68.706  1.00 24.53
ATOM   2631  CA  LYS A 336      38.468  34.609  70.061  1.00 25.38
ATOM   2632  C   LYS A 336      37.445  35.726  70.169  1.00 35.32
ATOM   2633  O   LYS A 336      36.908  36.004  71.233  1.00 38.14
ATOM   2634  CB  LYS A 336      39.820  35.199  70.421  1.00 25.45
ATOM   2635  CG  LYS A 336      40.871  34.188  70.825  1.00 25.43
ATOM   2636  CD  LYS A 336      42.207  34.846  71.189  1.00 47.10
ATOM   2637  CE  LYS A 336      43.325  34.600  70.172  1.00 68.74
ATOM   2638  NZ  LYS A 336      44.566  34.072  70.767  1.00 77.62
ATOM   2639  N   PHE A 337      37.174  36.364  69.029  1.00 31.52
ATOM   2640  CA  PHE A 337      36.186  37.442  68.967  1.00 29.34
ATOM   2641  C   PHE A 337      34.783  36.869  69.083  1.00 31.73
ATOM   2642  O   PHE A 337      33.908  37.424  69.742  1.00 35.53
ATOM   2643  CB  PHE A 337      36.304  38.336  67.709  1.00 30.04
ATOM   2644  CG  PHE A 337      35.435  39.589  67.747  1.00 35.16
ATOM   2645  CD1 PHE A 337      35.468  40.459  68.843  1.00 43.88
ATOM   2646  CD2 PHE A 337      34.550  39.893  66.709  1.00 40.16
ATOM   2647  CE1 PHE A 337      34.688  41.617  68.913  1.00 46.53
ATOM   2648  CE2 PHE A 337      33.753  41.040  66.760  1.00 45.62
ATOM   2649  CZ  PHE A 337      33.830  41.908  67.852  1.00 45.57
ATOM   2650  N   ARG A 338      34.566  35.733  68.452  1.00 25.52
ATOM   2651  CA  ARG A 338      33.266  35.119  68.508  1.00 25.23
ATOM   2652  C   ARG A 338      32.944  34.759  69.922  1.00 29.77
ATOM   2653  O   ARG A 338      31.854  35.025  70.415  1.00 31.81
ATOM   2654  CB  ARG A 338      33.186  33.920  67.606  1.00 24.04
ATOM   2655  CG  ARG A 338      31.839  33.228  67.623  1.00 21.31
ATOM   2656  CD  ARG A 338      31.807  32.086  66.599  1.00 30.62
ATOM   2657  NE  ARG A 338      32.518  30.892  67.040  1.00 29.87
ATOM   2658  CZ  ARG A 338      31.919  29.781  67.466  1.00 26.37
ATOM   2659  NH1 ARG A 338      30.616  29.687  67.518  1.00 20.26
ATOM   2660  NH2 ARG A 338      32.632  28.737  67.864  1.00 18.57
ATOM   2661  N   HIS A 339      33.934  34.190  70.577  1.00 25.88
ATOM   2662  CA  HIS A 339      33.813  33.797  71.982  1.00 25.59
ATOM   2663  C   HIS A 339      33.455  34.972  72.892  1.00 27.61
ATOM   2664  O   HIS A 339      32.615  34.912  73.793  1.00 25.27
ATOM   2665  CB  HIS A 339      35.065  33.045  72.462  1.00 25.06
ATOM   2666  CG  HIS A 339      34.923  31.587  72.155  1.00 28.13
ATOM   2667  ND1 HIS A 339      35.049  30.612  73.127  1.00 30.52
ATOM   2668  CD2 HIS A 339      34.586  30.970  70.981  1.00 30.89
ATOM   2669  CE1 HIS A 339      34.843  29.442  72.535  1.00 30.89
ATOM   2670  NE2 HIS A 339      34.546  29.616  71.245  1.00 31.36
ATOM   2671  N   PHE A 340      34.103  36.065  72.608  1.00 24.54
ATOM   2672  CA  PHE A 340      33.892  37.278  73.334  1.00 25.36
ATOM   2673  C   PHE A 340      32.452  37.762  73.216  1.00 32.47
ATOM   2674  O   PHE A 340      31.822  38.222  74.190  1.00 32.78
ATOM   2675  CB  PHE A 340      34.876  38.309  72.801  1.00 26.03
ATOM   2676  CG  PHE A 340      34.654  39.671  73.346  1.00 26.47
ATOM   2677  CD1 PHE A 340      35.238  40.047  74.559  1.00 24.59
ATOM   2678  CD2 PHE A 340      33.902  40.592  72.616  1.00 28.22
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ATOM   2679  CE1 PHE A 340      35.063  41.330  75.072  1.00 21.58
ATOM   2680  CE2 PHE A 340      33.715  41.879  73.115  1.00 29.13
ATOM   2681  CZ  PHE A 340      34.280  42.225  74.345  1.00 25.28
ATOM   2682  N   ASN A 341      31.944  37.663  72.004  1.00 28.41
ATOM   2683  CA  ASN A 341      30.600  38.084  71.728  1.00 29.60
ATOM   2684  C   ASN A 341      29.665  37.110  72.379  1.00 38.52
ATOM   2685  O   ASN A 341      28.699  37.511  73.029  1.00 42.88
ATOM   2686  CB  ASN A 341      30.322  38.274  70.224  1.00 30.01
ATOM   2687  CG  ASN A 341      31.159  39.374  69.587  1.00 52.80
ATOM   2688  OD1 ASN A 341      31.528  39.284  68.404  1.00 60.88
ATOM   2689  ND2 ASN A 341      31.442  40.427  70.359  1.00 41.02
ATOM   2690  N   ALA A 342      29.994  35.826  72.239  1.00 28.24
ATOM   2691  CA  ALA A 342      29.195  34.800  72.877  1.00 26.95
ATOM   2692  C   ALA A 342      29.013  35.134  74.393  1.00 35.98
ATOM   2693  O   ALA A 342      27.877  35.261  74.897  1.00 35.09
ATOM   2694  CB  ALA A 342      29.837  33.422  72.671  1.00 25.45
ATOM   2695  N   LEU A 343      30.153  35.304  75.122  1.00 29.16
ATOM   2696  CA  LEU A 343      30.162  35.633  76.560  1.00 22.58
ATOM   2697  C   LEU A 343      29.310  36.854  76.831  1.00 27.48
ATOM   2698  O   LEU A 343      28.452  36.821  77.696  1.00 32.73
ATOM   2699  CB  LEU A 343      31.583  35.786  77.147  1.00 18.70
ATOM   2700  CG  LEU A 343      31.647  35.693  78.671  1.00 20.08
ATOM   2701  CD1 LEU A 343      30.842  34.510  79.204  1.00 17.76
ATOM   2702  CD2 LEU A 343      33.091  35.522  79.111  1.00 21.94
ATOM   2703  N   GLY A 344      29.512  37.936  76.080  1.00 22.60
ATOM   2704  CA  GLY A 344      28.670  39.146  76.278  1.00 24.15
ATOM   2705  C   GLY A 344      27.157  38.824  76.136  1.00 31.38
ATOM   2706  O   GLY A 344      26.339  39.260  76.943  1.00 32.44
ATOM   2707  N   GLY A 345      26.806  38.017  75.094  1.00 22.79
ATOM   2708  CA  GLY A 345      25.451  37.587  74.801  1.00 19.88
ATOM   2709  C   GLY A 345      24.787  36.994  76.034  1.00 28.37
ATOM   2710  O   GLY A 345      23.632  37.294  76.325  1.00 27.56
ATOM   2711  N   TRP A 346      25.547  36.153  76.765  1.00 25.41
ATOM   2712  CA  TRP A 346      25.082  35.520  77.994  1.00 23.90
ATOM   2713  C   TRP A 346      24.825  36.541  79.071  1.00 31.54
ATOM   2714  O   TRP A 346      23.957  36.379  79.924  1.00 29.57
ATOM   2715  CB  TRP A 346      26.122  34.556  78.562  1.00 21.53
ATOM   2716  CG  TRP A 346      25.680  33.880  79.837  1.00 21.92
ATOM   2717  CD1 TRP A 346      25.933  34.335  81.079  1.00 24.36
ATOM   2718  CD2 TRP A 346      25.004  32.597  80.010  1.00 20.97
ATOM   2719  NE1 TRP A 346      25.450  33.453  82.008  1.00 23.95
ATOM   2720  CE2 TRP A 346      24.859  32.388  81.391  1.00 24.13
ATOM   2721  CE3 TRP A 346      24.488  31.611  79.144  1.00 21.46
ATOM   2722  CZ2 TRP A 346      24.225  31.244  81.921  1.00 22.89
ATOM   2723  CZ3 TRP A 346      23.872  30.477  79.662  1.00 22.03
ATOM   2724  CH2 TRP A 346      23.747  30.286  81.046  1.00 21.87
ATOM   2725  N   GLY A 347      25.627  37.593  79.039  1.00 29.66
ATOM   2726  CA  GLY A 347      25.465  38.625  80.042  1.00 29.03
ATOM   2727  C   GLY A 347      24.156  39.333  79.844  1.00 33.01
ATOM   2728  O   GLY A 347      23.491  39.647  80.799  1.00 34.17
ATOM   2729  N   GLU A 348      23.797  39.574  78.581  1.00 30.57
ATOM   2730  CA  GLU A 348      22.535  40.220  78.250  1.00 29.17
ATOM   2731  C   GLU A 348      21.423  39.282  78.664  1.00 31.25
ATOM   2732  O   GLU A 348      20.373  39.663  79.142  1.00 33.71
ATOM   2733  CB  GLU A 348      22.432  40.606  76.757  1.00 30.33
ATOM   2734  CG  GLU A 348      23.432  41.715  76.336  1.00 49.41
ATOM   2735  CD  GLU A 348      23.209  43.088  76.964  1.00 73.39
ATOM   2736  OE1 GLU A 348      22.295  43.846  76.656  1.00 71.22
ATOM   2737  OE2 GLU A 348      24.119  43.395  77.857  1.00 44.23
ATOM   2738  N   LEU A 349      21.682  38.011  78.541  1.00 27.36
ATOM   2739  CA  LEU A 349      20.677  37.081  78.976  1.00 26.89
ATOM   2740  C   LEU A 349      20.429  37.250  80.485  1.00 24.87
ATOM   2741  O   LEU A 349      19.299  37.403  80.914  1.00 28.31
ATOM   2742  CB  LEU A 349      20.984  35.630  78.529  1.00 27.18
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ATOM   2743  CG  LEU A 349      19.943  34.565  78.942  1.00 32.45
ATOM   2744  CD1 LEU A 349      18.611  34.704  78.154  1.00 30.09
ATOM   2745  CD2 LEU A 349      20.541  33.169  78.749  1.00 27.10
ATOM   2746  N   GLN A 350      21.460  37.255  81.315  1.00 14.78
ATOM   2747  CA  GLN A 350      21.188  37.428  82.727  1.00 18.51
ATOM   2748  C   GLN A 350      20.442  38.722  82.953  1.00 25.53
ATOM   2749  O   GLN A 350      19.495  38.833  83.737  1.00 28.35
ATOM   2750  CB  GLN A 350      22.469  37.369  83.536  1.00 22.22
ATOM   2751  CG  GLN A 350      23.512  36.426  82.919  1.00 22.37
ATOM   2752  CD  GLN A 350      24.871  36.673  83.547  1.00 34.49
ATOM   2753  OE1 GLN A 350      25.261  35.932  84.417  1.00 24.01
ATOM   2754  NE2 GLN A 350      25.588  37.727  83.127  1.00 36.58
ATOM   2755  N   ASN A 351      20.838  39.696  82.201  1.00 22.64
ATOM   2756  CA  ASN A 351      20.163  40.960  82.273  1.00 26.10
ATOM   2757  C   ASN A 351      18.661  40.780  82.083  1.00 37.49
ATOM   2758  O   ASN A 351      17.890  41.098  82.977  1.00 41.41
ATOM   2759  CB  ASN A 351      20.769  42.021  81.341  1.00 20.74
ATOM   2760  CG  ASN A 351      22.118  42.477  81.847  1.00 23.25
ATOM   2761  OD1 ASN A 351      22.692  41.875  82.771  1.00 26.88
ATOM   2762  ND2 ASN A 351      22.644  43.530  81.247  1.00 32.93
ATOM   2763  N   SER A 352      18.228  40.252  80.938  1.00 32.84
ATOM   2764  CA  SER A 352      16.784  40.041  80.715  1.00 34.27
ATOM   2765  C   SER A 352      16.107  39.135  81.784  1.00 31.72
ATOM   2766  O   SER A 352      14.927  39.266  82.189  1.00 28.64
ATOM   2767  CB  SER A 352      16.503  39.531  79.301  1.00 42.57
ATOM   2768  OG  SER A 352      17.506  39.979  78.407  1.00 49.17
ATOM   2769  N   VAL A 353      16.874  38.188  82.247  1.00 21.90
ATOM   2770  CA  VAL A 353      16.322  37.351  83.234  1.00 22.13
ATOM   2771  C   VAL A 353      16.068  38.122  84.516  1.00 36.22
ATOM   2772  O   VAL A 353      14.958  38.076  85.052  1.00 37.69
ATOM   2773  CB  VAL A 353      17.137  36.070  83.419  1.00 20.84
ATOM   2774  CG1 VAL A 353      16.632  35.256  84.634  1.00 15.06
ATOM   2775  CG2 VAL A 353      16.968  35.284  82.105  1.00 20.93
ATOM   2776  N   LYS A 354      17.086  38.847  85.002  1.00 30.67
ATOM   2777  CA  LYS A 354      16.880  39.587  86.221  1.00 31.71
ATOM   2778  C   LYS A 354      15.660  40.474  86.098  1.00 36.17
ATOM   2779  O   LYS A 354      14.808  40.582  86.980  1.00 35.80
ATOM   2780  CB  LYS A 354      18.099  40.396  86.624  1.00 35.28
ATOM   2781  CG  LYS A 354      17.841  41.303  87.818  1.00 51.51
ATOM   2782  CD  LYS A 354      19.038  41.405  88.749  1.00 60.46
ATOM   2783  CE  LYS A 354      19.198  42.780  89.383  1.00 50.09
ATOM   2784  NZ  LYS A 354      20.596  43.133  89.657  1.00 63.77
ATOM   2785  N   THR A 355      15.608  41.108  84.962  1.00 32.63
ATOM   2786  CA  THR A 355      14.562  42.025  84.610  1.00 34.03
ATOM   2787  C   THR A 355      13.129  41.422  84.578  1.00 42.11
ATOM   2788  O   THR A 355      12.216  42.006  85.154  1.00 40.96
ATOM   2789  CB  THR A 355      14.974  42.736  83.308  1.00 41.11
ATOM   2790  OG1 THR A 355      16.071  43.615  83.542  1.00 29.85
ATOM   2791  CG2 THR A 355      13.798  43.438  82.656  1.00 45.50
ATOM   2792  N   PHE A 356      12.895  40.273  83.908  1.00 33.89
ATOM   2793  CA  PHE A 356      11.556  39.729  83.860  1.00 29.29
ATOM   2794  C   PHE A 356      11.209  39.070  85.147  1.00 31.93
ATOM   2795  O   PHE A 356      10.089  39.152  85.642  1.00 33.85
ATOM   2796  CB  PHE A 356      11.460  38.645  82.785  1.00 33.30
ATOM   2797  CG  PHE A 356      11.187  39.196  81.416  1.00 36.54
ATOM   2798  CD1 PHE A 356      10.106  40.054  81.224  1.00 42.38
ATOM   2799  CD2 PHE A 356      11.985  38.858  80.320  1.00 38.62
ATOM   2800  CE1 PHE A 356       9.831  40.596  79.968  1.00 44.75
ATOM   2801  CE2 PHE A 356      11.723  39.384  79.055  1.00 43.46
ATOM   2802  CZ  PHE A 356      10.649  40.261  78.890  1.00 43.86
ATOM   2803  N   GLY A 357      12.212  38.386  85.661  1.00 30.41
ATOM   2804  CA  GLY A 357      12.152  37.564  86.864  1.00 29.17
ATOM   2805  C   GLY A 357      12.446  36.100  86.438  1.00 28.92
ATOM   2806  O   GLY A 357      12.008  35.642  85.372  1.00 27.33
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ATOM   2807  N   GLU A 358      13.211  35.382  87.243  1.00 21.27
ATOM   2808  CA  GLU A 358      13.590  34.040  86.898  1.00 23.10
ATOM   2809  C   GLU A 358      12.424  33.104  86.747  1.00 31.53
ATOM   2810  O   GLU A 358      12.581  31.972  86.294  1.00 30.92
ATOM   2811  CB  GLU A 358      14.596  33.473  87.880  1.00 25.36
ATOM   2812  CG  GLU A 358      14.011  33.436  89.301  1.00 38.73
ATOM   2813  CD  GLU A 358      15.011  33.037  90.345  1.00 56.34
ATOM   2814  OE1 GLU A 358      16.026  32.446  90.071  1.00 50.55
ATOM   2815  OE2 GLU A 358      14.678  33.403  91.564  1.00 75.65
ATOM   2816  N   THR A 359      11.246  33.542  87.139  1.00 27.87
ATOM   2817  CA  THR A 359      10.154  32.625  86.970  1.00 25.66
ATOM   2818  C   THR A 359       9.236  33.152  85.906  1.00 25.96
ATOM   2819  O   THR A 359       8.247  32.528  85.533  1.00 25.58
ATOM   2820  CB  THR A 359       9.423  32.341  88.253  1.00 25.00
ATOM   2821  OG1 THR A 359       8.908  33.565  88.692  1.00 33.10
ATOM   2822  CG2 THR A 359      10.406  31.785  89.273  1.00 14.43
ATOM   2823  N   HIS A 360       9.602  34.310  85.407  1.00 20.75
ATOM   2824  CA  HIS A 360       8.837  34.902  84.363  1.00 22.77
ATOM   2825  C   HIS A 360       8.823  34.034  83.130  1.00 35.30
ATOM   2826  O   HIS A 360       9.858  33.611  82.620  1.00 37.42
ATOM   2827  CB  HIS A 360       9.294  36.291  83.982  1.00 23.18
ATOM   2828  CG  HIS A 360       8.207  36.908  83.219  1.00 27.05
ATOM   2829  ND1 HIS A 360       7.532  38.009  83.691  1.00 29.34
ATOM   2830  CD2 HIS A 360       7.651  36.545  82.059  1.00 29.91
ATOM   2831  CE1 HIS A 360       6.596  38.315  82.806  1.00 27.94
ATOM   2832  NE2 HIS A 360       6.651  37.440  81.812  1.00 29.60
ATOM   2833  N   PRO A 361       7.606  33.817  82.666  1.00 32.40
ATOM   2834  CA  PRO A 361       7.301  32.999  81.519  1.00 29.46
ATOM   2835  C   PRO A 361       7.862  33.478  80.224  1.00 30.59
ATOM   2836  O   PRO A 361       7.907  32.737  79.248  1.00 33.00
ATOM   2837  CB  PRO A 361       5.770  32.963  81.478  1.00 30.74
ATOM   2838  CG  PRO A 361       5.311  33.172  82.927  1.00 34.96
ATOM   2839  CD  PRO A 361       6.463  33.869  83.627  1.00 31.82
ATOM   2840  N   PHE A 362       8.289  34.712  80.179  1.00 26.32
ATOM   2841  CA  PHE A 362       8.823  35.173  78.933  1.00 25.68
ATOM   2842  C   PHE A 362      10.261  34.781  78.829  1.00 29.73
ATOM   2843  O   PHE A 362      10.906  35.131  77.870  1.00 32.02
ATOM   2844  CB  PHE A 362       8.643  36.677  78.723  1.00 28.12
ATOM   2845  CG  PHE A 362       7.194  37.105  78.629  1.00 30.03
ATOM   2846  CD1 PHE A 362       6.204  36.276  78.098  1.00 30.92
ATOM   2847  CD2 PHE A 362       6.804  38.372  79.051  1.00 32.04
ATOM   2848  CE1 PHE A 362       4.864  36.655  77.998  1.00 26.59
ATOM   2849  CE2 PHE A 362       5.470  38.773  78.952  1.00 32.40
ATOM   2850  CZ  PHE A 362       4.495  37.920  78.435  1.00 26.37
ATOM   2851  N   THR A 363      10.730  34.049  79.843  1.00 27.22
ATOM   2852  CA  THR A 363      12.102  33.575  79.943  1.00 27.52
ATOM   2853  C   THR A 363      12.251  32.132  79.504  1.00 29.28
ATOM   2854  O   THR A 363      13.331  31.560  79.524  1.00 29.42
ATOM   2855  CB  THR A 363      12.697  33.777  81.360  1.00 31.67
ATOM   2856  OG1 THR A 363      12.279  32.745  82.218  1.00 26.17
ATOM   2857  CG2 THR A 363      12.278  35.118  81.930  1.00 31.62
ATOM   2858  N   LYS A 364      11.148  31.530  79.113  1.00 23.08
ATOM   2859  CA  LYS A 364      11.174  30.160  78.664  1.00 20.50
ATOM   2860  C   LYS A 364      11.556  30.270  77.217  1.00 28.83
ATOM   2861  O   LYS A 364      11.139  31.239  76.570  1.00 29.80
ATOM   2862  CB  LYS A 364       9.766  29.584  78.667  1.00 23.55
ATOM   2863  CG  LYS A 364       9.252  29.134  80.022  1.00 40.85
ATOM   2864  CD  LYS A 364       7.761  29.369  80.162  1.00 44.83
ATOM   2865  CE  LYS A 364       7.131  28.492  81.224  1.00 66.38
ATOM   2866  NZ  LYS A 364       6.063  27.638  80.691  1.00 91.70
ATOM   2867  N   LEU A 365      12.332  29.328  76.698  1.00 23.57
ATOM   2868  CA  LEU A 365      12.699  29.420  75.312  1.00 23.95
ATOM   2869  C   LEU A 365      11.414  29.419  74.445  1.00 35.57
ATOM   2870  O   LEU A 365      11.166  30.369  73.708  1.00 34.58
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ATOM   2871  CB  LEU A 365      13.702  28.303  75.021  1.00 25.08
ATOM   2872  CG  LEU A 365      14.456  28.372  73.702  1.00 31.15
ATOM   2873  CD1 LEU A 365      14.987  29.778  73.466  1.00 33.16
ATOM   2874  CD2 LEU A 365      15.609  27.353  73.781  1.00 30.62
ATOM   2875  N   VAL A 366      10.572  28.360  74.564  1.00 35.62
ATOM   2876  CA  VAL A 366       9.294  28.232  73.840  1.00 32.10
ATOM   2877  C   VAL A 366       8.211  28.911  74.694  1.00 33.14
ATOM   2878  O   VAL A 366       7.982  28.470  75.808  1.00 34.20
ATOM   2879  CB  VAL A 366       8.936  26.739  73.568  1.00 34.73
ATOM   2880  CG1 VAL A 366       7.558  26.605  72.933  1.00 34.88
ATOM   2881  CG2 VAL A 366       9.922  26.012  72.649  1.00 32.65
ATOM   2882  N   VAL A 367       7.562  29.990  74.211  1.00 28.76
ATOM   2883  CA  VAL A 367       6.532  30.700  74.987  1.00 28.27
ATOM   2884  C   VAL A 367       5.161  30.613  74.420  1.00 30.62
ATOM   2885  O   VAL A 367       4.994  30.509  73.235  1.00 34.30
ATOM   2886  CB  VAL A 367       6.773  32.185  75.061  1.00 33.45
ATOM   2887  CG1 VAL A 367       8.178  32.478  75.565  1.00 33.03
ATOM   2888  CG2 VAL A 367       6.498  32.804  73.693  1.00 33.18
ATOM   2889  N   ASP A 368       4.168  30.722  75.290  1.00 29.27
ATOM   2890  CA  ASP A 368       2.764  30.771  74.984  1.00 27.67
ATOM   2891  C   ASP A 368       2.315  32.207  74.862  1.00 26.94
ATOM   2892  O   ASP A 368       2.283  32.975  75.830  1.00 23.11
ATOM   2893  CB  ASP A 368       1.990  30.073  76.100  1.00 26.80
ATOM   2894  CG  ASP A 368       0.572  29.781  75.613  1.00 37.90
ATOM   2895  OD1 ASP A 368       0.276  30.123  74.481  1.00 38.93
ATOM   2896  OD2 ASP A 368      -0.215  29.217  76.380  1.00 38.59
ATOM   2897  N   LEU A 369       2.027  32.588  73.622  1.00 26.55
ATOM   2898  CA  LEU A 369       1.643  33.953  73.373  1.00 27.39
ATOM   2899  C   LEU A 369       0.138  34.105  73.301  1.00 30.74
ATOM   2900  O   LEU A 369      -0.372  34.979  72.648  1.00 30.68
ATOM   2901  CB  LEU A 369       2.281  34.395  72.064  1.00 26.06
ATOM   2902  CG  LEU A 369       3.759  34.760  72.229  1.00 26.80
ATOM   2903  CD1 LEU A 369       4.343  35.415  70.994  1.00 24.30
ATOM   2904  CD2 LEU A 369       4.014  35.728  73.384  1.00 21.81
ATOM   2905  N   THR A 370      -0.577  33.154  73.953  1.00 30.26
ATOM   2906  CA  THR A 370      -2.022  33.306  74.093  1.00 31.38
ATOM   2907  C   THR A 370      -2.355  34.519  74.941  1.00 38.62
ATOM   2908  O   THR A 370      -1.821  34.714  76.027  1.00 38.84
ATOM   2909  CB  THR A 370      -2.601  32.056  74.750  1.00 34.04
ATOM   2910  OG1 THR A 370      -2.472  30.949  73.873  1.00 29.99
ATOM   2911  CG2 THR A 370      -4.091  32.266  75.052  1.00 26.40
ATOM   2912  N   ASP A 371      -3.173  35.387  74.363  1.00 37.89
ATOM   2913  CA  ASP A 371      -3.641  36.612  75.012  1.00 37.85
ATOM   2914  C   ASP A 371      -2.557  37.636  75.255  1.00 40.92
ATOM   2915  O   ASP A 371      -2.784  38.625  75.933  1.00 41.63
ATOM   2916  CB  ASP A 371      -4.519  36.375  76.245  1.00 39.88
ATOM   2917  CG  ASP A 371      -5.805  35.733  75.798  1.00 51.30
ATOM   2918  OD1 ASP A 371      -6.373  36.072  74.761  1.00 50.39
ATOM   2919  OD2 ASP A 371      -6.206  34.754  76.583  1.00 48.61
ATOM   2920  N   ILE A 372      -1.387  37.398  74.664  1.00 36.37
ATOM   2921  CA  ILE A 372      -0.259  38.283  74.817  1.00 34.61
ATOM   2922  C   ILE A 372       0.203  39.018  73.555  1.00 35.46
ATOM   2923  O   ILE A 372       0.545  38.400  72.548  1.00 36.69
ATOM   2924  CB  ILE A 372       0.920  37.511  75.381  1.00 36.51
ATOM   2925  CG1 ILE A 372       0.658  37.195  76.842  1.00 37.01
ATOM   2926  CG2 ILE A 372       2.121  38.441  75.281  1.00 35.52
ATOM   2927  CD1 ILE A 372       1.268  38.261  77.747  1.00 54.33
ATOM   2928  N   ASP A 373       0.254  40.345  73.601  1.00 25.92
ATOM   2929  CA  ASP A 373       0.747  41.053  72.450  1.00 23.77
ATOM   2930  C   ASP A 373       2.263  40.781  72.360  1.00 31.40
ATOM   2931  O   ASP A 373       3.040  41.002  73.305  1.00 32.80
ATOM   2932  CB  ASP A 373       0.408  42.543  72.519  1.00 25.08
ATOM   2933  CG  ASP A 373       1.064  43.356  71.418  1.00 43.24
ATOM   2934  OD1 ASP A 373       1.861  42.894  70.616  1.00 45.30
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ATOM   2935  OD2 ASP A 373       0.668  44.610  71.395  1.00 38.59
ATOM   2936  N   PRO A 374       2.709  40.267  71.225  1.00 29.51
ATOM   2937  CA  PRO A 374       4.123  39.943  71.132  1.00 28.52
ATOM   2938  C   PRO A 374       5.029  41.090  71.506  1.00 32.54
ATOM   2939  O   PRO A 374       6.019  40.905  72.217  1.00 29.62
ATOM   2940  CB  PRO A 374       4.390  39.421  69.714  1.00 28.88
ATOM   2941  CG  PRO A 374       3.028  39.278  69.032  1.00 32.27
ATOM   2942  CD  PRO A 374       1.966  39.786  70.008  1.00 28.84
ATOM   2943  N   ASP A 375       4.660  42.257  70.981  1.00 26.85
ATOM   2944  CA  ASP A 375       5.357  43.511  71.154  1.00 24.25
ATOM   2945  C   ASP A 375       5.695  43.783  72.628  1.00 33.10
ATOM   2946  O   ASP A 375       6.648  44.494  72.988  1.00 30.67
ATOM   2947  CB  ASP A 375       4.507  44.617  70.509  1.00 24.46
ATOM   2948  CG  ASP A 375       4.753  44.836  69.033  1.00 30.08
ATOM   2949  OD1 ASP A 375       5.703  44.393  68.411  1.00 33.47
ATOM   2950  OD2 ASP A 375       3.852  45.609  68.491  1.00 38.41
ATOM   2951  N   VAL A 376       4.885  43.161  73.477  1.00 30.21
ATOM   2952  CA  VAL A 376       5.001  43.232  74.904  1.00 25.40
ATOM   2953  C   VAL A 376       5.879  42.106  75.431  1.00 37.27
ATOM   2954  O   VAL A 376       6.599  42.299  76.394  1.00 42.46
ATOM   2955  CB  VAL A 376       3.638  43.099  75.550  1.00 22.48
ATOM   2956  CG1 VAL A 376       3.799  42.533  76.975  1.00 21.25
ATOM   2957  CG2 VAL A 376       2.926  44.440  75.547  1.00 18.29
ATOM   2958  N   ALA A 377       5.811  40.905  74.831  1.00 30.48
ATOM   2959  CA  ALA A 377       6.671  39.793  75.288  1.00 27.04
ATOM   2960  C   ALA A 377       8.149  39.911  74.797  1.00 28.15
ATOM   2961  O   ALA A 377       9.077  39.325  75.312  1.00 27.36
ATOM   2962  CB  ALA A 377       6.091  38.433  74.891  1.00 26.74
ATOM   2963  N   TYR A 378       8.376  40.692  73.768  1.00 25.81
ATOM   2964  CA  TYR A 378       9.683  40.876  73.161  1.00 25.43
ATOM   2965  C   TYR A 378      10.862  41.194  74.057  1.00 30.49
ATOM   2966  O   TYR A 378      10.873  42.204  74.747  1.00 32.35
ATOM   2967  CB  TYR A 378       9.549  41.924  72.068  1.00 26.20
ATOM   2968  CG  TYR A 378      10.804  42.168  71.327  1.00 19.90
ATOM   2969  CD1 TYR A 378      11.256  41.231  70.406  1.00 18.53
ATOM   2970  CD2 TYR A 378      11.536  43.331  71.543  1.00 18.47
ATOM   2971  CE1 TYR A 378      12.444  41.436  69.716  1.00 15.98
ATOM   2972  CE2 TYR A 378      12.719  43.555  70.840  1.00 18.77
ATOM   2973  CZ  TYR A 378      13.161  42.609  69.920  1.00 16.37
ATOM   2974  OH  TYR A 378      14.309  42.811  69.212  1.00 32.30
ATOM   2975  N   SER A 379      11.879  40.317  73.977  1.00 23.03
ATOM   2976  CA  SER A 379      13.115  40.430  74.725  1.00 18.13
ATOM   2977  C   SER A 379      14.267  39.777  73.970  1.00 20.60
ATOM   2978  O   SER A 379      14.100  39.334  72.843  1.00 18.46
ATOM   2979  CB  SER A 379      12.976  39.740  76.067  1.00 23.56
ATOM   2980  OG  SER A 379      12.805  38.329  75.883  1.00 37.26
ATOM   2981  N   SER A 380      15.424  39.697  74.651  1.00 23.65
ATOM   2982  CA  SER A 380      16.701  39.084  74.222  1.00 26.09
ATOM   2983  C   SER A 380      16.669  37.571  74.457  1.00 28.37
ATOM   2984  O   SER A 380      17.480  36.785  73.975  1.00 30.81
ATOM   2985  CB  SER A 380      17.889  39.588  75.062  1.00 31.60
ATOM   2986  OG  SER A 380      18.036  41.000  75.033  1.00 42.48
ATOM   2987  N   VAL A 381      15.718  37.188  75.260  1.00 18.04
ATOM   2988  CA  VAL A 381      15.595  35.812  75.598  1.00 14.91
ATOM   2989  C   VAL A 381      15.708  34.897  74.419  1.00 20.31
ATOM   2990  O   VAL A 381      16.620  34.091  74.330  1.00 27.64
ATOM   2991  CB  VAL A 381      14.408  35.546  76.501  1.00 16.34
ATOM   2992  CG1 VAL A 381      14.284  34.062  76.734  1.00 17.26
ATOM   2993  CG2 VAL A 381      14.687  36.204  77.829  1.00 13.94
ATOM   2994  N   PRO A 382      14.797  35.005  73.489  1.00 16.53
ATOM   2995  CA  PRO A 382      14.886  34.139  72.324  1.00 17.21
ATOM   2996  C   PRO A 382      16.222  34.230  71.634  1.00 24.01
ATOM   2997  O   PRO A 382      16.709  33.192  71.207  1.00 27.79
ATOM   2998  CB  PRO A 382      13.777  34.514  71.351  1.00 17.20
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ATOM	2999	CG	PRO	A	382	13.003	35.618	72.033	1.00	18.32
ATOM	3000	CD	PRO	A	382	13.627	35.873	73.399	1.00	12.12
ATOM	3001	N	TYR	A	383	16.809	35.447	71.542	1.00	19.33
ATOM	3002	CA	TYR	A	383	18.112	35.648	70.902	1.00	19.70
ATOM	3003	C	TYR	A	383	19.246	34.953	71.651	1.00	28.79
ATOM	3004	O	TYR	A	383	19.980	34.117	71.104	1.00	31.38
ATOM	3005	CB	TYR	A	383	18.468	37.135	70.894	1.00	21.02
ATOM	3006	CG	TYR	A	383	17.593	37.968	70.011	1.00	23.86
ATOM	3007	CD1	TYR	A	383	16.290	38.277	70.404	1.00	28.36
ATOM	3008	CD2	TYR	A	383	18.067	38.450	68.784	1.00	20.93
ATOM	3009	CE1	TYR	A	383	15.473	39.054	69.576	1.00	30.88
ATOM	3010	CE2	TYR	A	383	17.272	39.244	67.957	1.00	18.71
ATOM	3011	CZ	TYR	A	383	15.967	39.533	68.358	1.00	25.95
ATOM	3012	OH	TYR	A	383	15.171	40.294	67.556	1.00	30.84
ATOM	3013	N	GLU	A	384	19.389	35.333	72.921	1.00	20.17
ATOM	3014	CA	GLU	A	384	20.419	34.857	73.803	1.00	17.57
ATOM	3015	C	GLU	A	384	20.188	33.506	74.405	1.00	22.88
ATOM	3016	O	GLU	A	384	21.151	32.775	74.669	1.00	25.65
ATOM	3017	CB	GLU	A	384	20.833	35.973	74.773	1.00	20.44
ATOM	3018	CG	GLU	A	384	21.263	37.202	73.944	1.00	15.21
ATOM	3019	CD	GLU	A	384	22.539	36.937	73.184	1.00	26.58
ATOM	3020	OE1	GLU	A	384	23.185	35.915	73.293	1.00	17.84
ATOM	3021	OE2	GLU	A	384	22.887	37.915	72.400	1.00	21.88
ATOM	3022	N	LYS	A	385	18.935	33.116	74.610	1.00	20.33
ATOM	3023	CA	LYS	A	385	18.736	31.767	75.146	1.00	20.05
ATOM	3024	C	LYS	A	385	18.865	30.716	74.028	1.00	27.19
ATOM	3025	O	LYS	A	385	19.420	29.621	74.219	1.00	31.66
ATOM	3026	CB	LYS	A	385	17.507	31.577	76.014	1.00	21.51
ATOM	3027	CG	LYS	A	385	17.676	30.384	76.953	1.00	22.29
ATOM	3028	CD	LYS	A	385	16.386	29.820	77.518	1.00	19.87
ATOM	3029	CE	LYS	A	385	16.049	30.277	78.937	1.00	31.60
ATOM	3030	NZ	LYS	A	385	14.783	29.694	79.441	1.00	30.38
ATOM	3031	N	GLY	A	386	18.364	31.084	72.832	1.00	20.72
ATOM	3032	CA	GLY	A	386	18.453	30.248	71.637	1.00	17.41
ATOM	3033	C	GLY	A	386	19.924	30.106	71.298	1.00	20.81
ATOM	3034	O	GLY	A	386	20.396	29.001	71.225	1.00	22.50
ATOM	3035	N	PHE	A	387	20.683	31.228	71.163	1.00	20.30
ATOM	3036	CA	PHE	A	387	22.137	31.158	70.900	1.00	19.92
ATOM	3037	C	PHE	A	387	22.840	30.263	71.905	1.00	29.09
ATOM	3038	O	PHE	A	387	23.685	29.478	71.530	1.00	32.80
ATOM	3039	CB	PHE	A	387	22.852	32.519	70.955	1.00	20.07
ATOM	3040	CG	PHE	A	387	24.344	32.358	70.872	1.00	19.41
ATOM	3041	CD1	PHE	A	387	24.949	32.163	69.631	1.00	19.67
ATOM	3042	CD2	PHE	A	387	25.157	32.373	72.007	1.00	25.27
ATOM	3043	CE1	PHE	A	387	26.329	31.977	69.525	1.00	20.88
ATOM	3044	CE2	PHE	A	387	26.542	32.202	71.916	1.00	28.83
ATOM	3045	CZ	PHE	A	387	27.131	31.981	70.668	1.00	23.24
ATOM	3046	N	ALA	A	388	22.495	30.381	73.203	1.00	25.48
ATOM	3047	CA	ALA	A	388	23.133	29.556	74.242	1.00	23.14
ATOM	3048	C	ALA	A	388	22.872	28.108	74.055	1.00	32.10
ATOM	3049	O	ALA	A	388	23.757	27.282	74.258	1.00	37.82
ATOM	3050	CB	ALA	A	388	22.717	29.932	75.633	1.00	23.02
ATOM	3051	N	LEU	A	389	21.636	27.793	73.691	1.00	26.31
ATOM	3052	CA	LEU	A	389	21.275	26.405	73.460	1.00	21.42
ATOM	3053	C	LEU	A	389	22.189	25.906	72.372	1.00	27.91
ATOM	3054	O	LEU	A	389	22.865	24.900	72.532	1.00	29.25
ATOM	3055	CB	LEU	A	389	19.841	26.300	72.937	1.00	19.24
ATOM	3056	CG	LEU	A	389	19.427	24.868	72.632	1.00	17.17
ATOM	3057	CD1	LEU	A	389	19.717	24.017	73.844	1.00	14.63
ATOM	3058	CD2	LEU	A	389	17.943	24.808	72.328	1.00	10.16
ATOM	3059	N	LEU	A	390	22.217	26.659	71.262	1.00	24.49
ATOM	3060	CA	LEU	A	390	23.050	26.340	70.107	1.00	25.05
ATOM	3061	C	LEU	A	390	24.531	26.256	70.383	1.00	32.31
ATOM	3062	O	LEU	A	390	25.183	25.301	69.932	1.00	33.60

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ATOM   3063  CB  LEU A 390      22.765  27.152  68.844  1.00 23.33
ATOM   3064  CG  LEU A 390      21.307  27.026  68.442  1.00 23.38
ATOM   3065  CD1 LEU A 390      20.986  28.025  67.334  1.00 20.84
ATOM   3066  CD2 LEU A 390      20.988  25.591  68.017  1.00 18.86
ATOM   3067  N   PHE A 391      25.058  27.231  71.127  1.00 28.52
ATOM   3068  CA  PHE A 391      26.480  27.236  71.494  1.00 27.82
ATOM   3069  C   PHE A 391      26.813  25.992  72.312  1.00 28.67
ATOM   3070  O   PHE A 391      27.839  25.331  72.148  1.00 26.96
ATOM   3071  CB  PHE A 391      26.834  28.455  72.341  1.00 28.60
ATOM   3072  CG  PHE A 391      28.296  28.786  72.283  1.00 30.53
ATOM   3073  CD1 PHE A 391      28.967  28.816  71.064  1.00 35.08
ATOM   3074  CD2 PHE A 391      29.020  29.063  73.440  1.00 36.52
ATOM   3075  CE1 PHE A 391      30.320  29.142  70.983  1.00 37.61
ATOM   3076  CE2 PHE A 391      30.378  29.383  73.382  1.00 40.61
ATOM   3077  CZ  PHE A 391      31.026  29.432  72.148  1.00 37.64
ATOM   3078  N   TYR A 392      25.913  25.699  73.225  1.00 24.90
ATOM   3079  CA  TYR A 392      26.044  24.550  74.065  1.00 24.66
ATOM   3080  C   TYR A 392      26.106  23.298  73.186  1.00 34.30
ATOM   3081  O   TYR A 392      27.058  22.558  73.268  1.00 37.51
ATOM   3082  CB  TYR A 392      24.821  24.501  74.967  1.00 26.39
ATOM   3083  CG  TYR A 392      24.631  23.181  75.678  1.00 31.99
ATOM   3084  CD1 TYR A 392      25.546  22.715  76.625  1.00 35.17
ATOM   3085  CD2 TYR A 392      23.501  22.397  75.432  1.00 32.49
ATOM   3086  CE1 TYR A 392      25.341  21.512  77.306  1.00 39.01
ATOM   3087  CE2 TYR A 392      23.281  21.184  76.094  1.00 31.50
ATOM   3088  CZ  TYR A 392      24.206  20.743  77.035  1.00 34.08
ATOM   3089  OH  TYR A 392      23.986  19.564  77.683  1.00 36.46
ATOM   3090  N   LEU A 393      25.101  23.067  72.310  1.00 31.02
ATOM   3091  CA  LEU A 393      25.043  21.889  71.410  1.00 29.65
ATOM   3092  C   LEU A 393      26.274  21.616  70.507  1.00 32.03
ATOM   3093  O   LEU A 393      26.664  20.468  70.267  1.00 27.90
ATOM   3094  CB  LEU A 393      23.758  21.905  70.552  1.00 28.85
ATOM   3095  CG  LEU A 393      22.489  21.688  71.375  1.00 30.33
ATOM   3096  CD1 LEU A 393      21.256  22.047  70.559  1.00 27.38
ATOM   3097  CD2 LEU A 393      22.400  20.246  71.865  1.00 29.76
ATOM   3098  N   GLU A 394      26.841  22.701  69.980  1.00 30.84
ATOM   3099  CA  GLU A 394      28.000  22.727  69.118  1.00 30.05
ATOM   3100  C   GLU A 394      29.210  22.214  69.868  1.00 39.16
ATOM   3101  O   GLU A 394      30.089  21.595  69.299  1.00 42.14
ATOM   3102  CB  GLU A 394      28.300  24.204  68.756  1.00 31.03
ATOM   3103  CG  GLU A 394      29.776  24.406  68.376  1.00 37.11
ATOM   3104  CD  GLU A 394      30.182  25.830  68.208  1.00 45.20
ATOM   3105  OE1 GLU A 394      29.614  26.609  67.471  1.00 56.77
ATOM   3106  OE2 GLU A 394      31.229  26.133  68.927  1.00 39.77
ATOM   3107  N   GLN A 395      29.256  22.534  71.160  1.00 34.20
ATOM   3108  CA  GLN A 395      30.342  22.139  72.029  1.00 32.86
ATOM   3109  C   GLN A 395      30.143  20.690  72.435  1.00 38.65
ATOM   3110  O   GLN A 395      31.066  19.899  72.507  1.00 38.67
ATOM   3111  CB  GLN A 395      30.474  23.051  73.287  1.00 33.17
ATOM   3112  CG  GLN A 395      30.831  24.540  72.996  1.00 13.79
ATOM   3113  CD  GLN A 395      31.176  25.354  74.247  1.00 37.45
ATOM   3114  OE1 GLN A 395      30.909  24.959  75.407  1.00 26.89
ATOM   3115  NE2 GLN A 395      31.758  26.523  74.010  1.00 31.99
ATOM   3116  N   LEU A 396      28.903  20.352  72.682  1.00 38.68
ATOM   3117  CA  LEU A 396      28.514  19.015  73.083  1.00 38.49
ATOM   3118  C   LEU A 396      28.633  18.017  71.924  1.00 39.28
ATOM   3119  O   LEU A 396      29.012  16.871  72.100  1.00 42.17
ATOM   3120  CB  LEU A 396      27.055  19.072  73.628  1.00 37.93
ATOM   3121  CG  LEU A 396      26.389  17.732  73.946  1.00 42.72
ATOM   3122  CD1 LEU A 396      26.436  17.489  75.445  1.00 45.42
ATOM   3123  CD2 LEU A 396      24.917  17.709  73.527  1.00 43.81
ATOM   3124  N   LEU A 397      28.303  18.456  70.730  1.00 28.48
ATOM   3125  CA  LEU A 397      28.337  17.595  69.589  1.00 25.49
ATOM   3126  C   LEU A 397      29.620  17.609  68.771  1.00 36.86
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ATOM   3127  O   LEU A 397      29.596  17.220  67.599  1.00 39.85
ATOM   3128  CB  LEU A 397      27.156  17.924  68.686  1.00 23.73
ATOM   3129  CG  LEU A 397      25.843  17.773  69.401  1.00 25.82
ATOM   3130  CD1 LEU A 397      24.740  18.559  68.669  1.00 22.99
ATOM   3131  CD2 LEU A 397      25.525  16.272  69.452  1.00 27.30
ATOM   3132  N   GLY A 398      30.731  18.069  69.342  1.00 33.98
ATOM   3133  CA  GLY A 398      31.993  18.038  68.617  1.00 34.14
ATOM   3134  C   GLY A 398      32.547  19.260  67.889  1.00 38.92
ATOM   3135  O   GLY A 398      33.502  19.097  67.115  1.00 39.98
ATOM   3136  N   GLY A 399      32.001  20.457  68.105  1.00 33.01
ATOM   3137  CA  GLY A 399      32.543  21.650  67.440  1.00 30.35
ATOM   3138  C   GLY A 399      31.713  22.336  66.365  1.00 31.72
ATOM   3139  O   GLY A 399      30.800  21.823  65.762  1.00 34.57
ATOM   3140  N   PRO A 400      32.076  23.550  66.124  1.00 33.01
ATOM   3141  CA  PRO A 400      31.429  24.406  65.151  1.00 35.02
ATOM   3142  C   PRO A 400      31.379  23.794  63.750  1.00 43.93
ATOM   3143  O   PRO A 400      30.360  23.838  63.045  1.00 40.14
ATOM   3144  CB  PRO A 400      32.293  25.672  65.111  1.00 35.73
ATOM   3145  CG  PRO A 400      33.539  25.411  65.948  1.00 38.03
ATOM   3146  CD  PRO A 400      33.423  24.010  66.517  1.00 33.92
ATOM   3147  N   GLU A 401      32.512  23.237  63.345  1.00 43.85
ATOM   3148  CA  GLU A 401      32.597  22.620  62.042  1.00 42.92
ATOM   3149  C   GLU A 401      31.491  21.587  61.878  1.00 37.92
ATOM   3150  O   GLU A 401      30.810  21.588  60.866  1.00 33.79
ATOM   3151  CB  GLU A 401      33.996  22.034  61.789  1.00 45.93
ATOM   3152  CG  GLU A 401      34.578  22.372  60.398  1.00 69.62
ATOM   3153  CD  GLU A 401      35.603  21.373  59.911  1.00100.00
ATOM   3154  OE1 GLU A 401      36.702  21.236  60.427  1.00100.00
ATOM   3155  OE2 GLU A 401      35.195  20.689  58.865  1.00 93.16
ATOM   3156  N   ILE A 402      31.317  20.720  62.902  1.00 34.58
ATOM   3157  CA  ILE A 402      30.281  19.681  62.922  1.00 33.20
ATOM   3158  C   ILE A 402      28.898  20.291  62.938  1.00 39.09
ATOM   3159  O   ILE A 402      28.065  19.896  62.133  1.00 41.43
ATOM   3160  CB  ILE A 402      30.391  18.673  64.078  1.00 33.82
ATOM   3161  CG1 ILE A 402      31.490  17.661  63.811  1.00 34.70
ATOM   3162  CG2 ILE A 402      29.080  17.900  64.287  1.00 23.32
ATOM   3163  CD1 ILE A 402      31.878  16.896  65.080  1.00 49.20
ATOM   3164  N   PHE A 403      28.668  21.246  63.868  1.00 32.73
ATOM   3165  CA  PHE A 403      27.390  21.952  64.044  1.00 29.52
ATOM   3166  C   PHE A 403      27.032  22.816  62.836  1.00 33.94
ATOM   3167  O   PHE A 403      25.866  23.022  62.469  1.00 34.15
ATOM   3168  CB  PHE A 403      27.319  22.719  65.381  1.00 29.03
ATOM   3169  CG  PHE A 403      25.917  22.783  65.929  1.00 28.54
ATOM   3170  CD1 PHE A 403      25.323  21.643  66.484  1.00 29.91
ATOM   3171  CD2 PHE A 403      25.176  23.964  65.873  1.00 27.62
ATOM   3172  CE1 PHE A 403      24.021  21.667  66.990  1.00 27.38
ATOM   3173  CE2 PHE A 403      23.881  24.017  66.393  1.00 28.82
ATOM   3174  CZ  PHE A 403      23.304  22.863  66.932  1.00 25.72
ATOM   3175  N   LEU A 404      28.040  23.327  62.165  1.00 31.31
ATOM   3176  CA  LEU A 404      27.687  24.080  60.983  1.00 32.95
ATOM   3177  C   LEU A 404      27.068  23.099  59.952  1.00 32.89
ATOM   3178  O   LEU A 404      26.050  23.361  59.315  1.00 37.36
ATOM   3179  CB  LEU A 404      28.798  25.045  60.464  1.00 33.15
ATOM   3180  CG  LEU A 404      29.029  26.208  61.444  1.00 36.96
ATOM   3181  CD1 LEU A 404      30.454  26.717  61.353  1.00 37.13
ATOM   3182  CD2 LEU A 404      28.083  27.362  61.163  1.00 39.27
ATOM   3183  N   GLY A 405      27.670  21.921  59.826  1.00 22.02
ATOM   3184  CA  GLY A 405      27.167  20.908  58.928  1.00 22.77
ATOM   3185  C   GLY A 405      25.698  20.676  59.206  1.00 31.85
ATOM   3186  O   GLY A 405      24.885  20.438  58.297  1.00 33.01
ATOM   3187  N   PHE A 406      25.364  20.747  60.493  1.00 26.28
ATOM   3188  CA  PHE A 406      23.992  20.565  60.863  1.00 25.27
ATOM   3189  C   PHE A 406      23.188  21.757  60.365  1.00 34.80
ATOM   3190  O   PHE A 406      22.195  21.629  59.638  1.00 36.22
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ATOM   3191  CB  PHE A 406      23.798  20.268  62.351  1.00 24.52
ATOM   3192  CG  PHE A 406      22.388  20.525  62.798  1.00 24.82
ATOM   3193  CD1 PHE A 406      21.328  19.734  62.353  1.00 28.50
ATOM   3194  CD2 PHE A 406      22.107  21.579  63.669  1.00 30.12
ATOM   3195  CE1 PHE A 406      20.025  19.977  62.793  1.00 31.40
ATOM   3196  CE2 PHE A 406      20.810  21.862  64.105  1.00 32.57
ATOM   3197  CZ  PHE A 406      19.771  21.037  63.669  1.00 31.88
ATOM   3198  N   LEU A 407      23.661  22.934  60.708  1.00 32.11
ATOM   3199  CA  LEU A 407      22.972  24.132  60.269  1.00 33.11
ATOM   3200  C   LEU A 407      22.706  24.204  58.767  1.00 34.74
ATOM   3201  O   LEU A 407      21.635  24.615  58.341  1.00 35.21
ATOM   3202  CB  LEU A 407      23.589  25.420  60.840  1.00 35.36
ATOM   3203  CG  LEU A 407      22.597  26.577  60.855  1.00 41.79
ATOM   3204  CD1 LEU A 407      23.048  27.626  61.833  1.00 40.45
ATOM   3205  CD2 LEU A 407      22.513  27.197  59.461  1.00 49.57
ATOM   3206  N   LYS A 408      23.667  23.804  57.948  1.00 34.92
ATOM   3207  CA  LYS A 408      23.476  23.826  56.490  1.00 36.29
ATOM   3208  C   LYS A 408      22.378  22.876  56.037  1.00 38.15
ATOM   3209  O   LYS A 408      21.568  23.191  55.160  1.00 35.09
ATOM   3210  CB  LYS A 408      24.747  23.517  55.707  1.00 40.54
ATOM   3211  CG  LYS A 408      24.633  23.873  54.214  1.00 43.41
ATOM   3212  CD  LYS A 408      25.950  23.796  53.422  1.00 49.26
ATOM   3213  CE  LYS A 408      26.808  25.059  53.459  1.00 61.45
ATOM   3214  NZ  LYS A 408      28.014  24.994  52.606  1.00 73.78
ATOM   3215  N   ALA A 409      22.352  21.690  56.655  1.00 35.34
ATOM   3216  CA  ALA A 409      21.333  20.698  56.298  1.00 36.14
ATOM   3217  C   ALA A 409      19.927  21.041  56.814  1.00 38.45
ATOM   3218  O   ALA A 409      18.913  20.821  56.134  1.00 37.39
ATOM   3219  CB  ALA A 409      21.762  19.273  56.626  1.00 36.66
ATOM   3220  N   TYR A 410      19.902  21.597  58.030  1.00 33.14
ATOM   3221  CA  TYR A 410      18.693  22.059  58.682  1.00 29.65
ATOM   3222  C   TYR A 410      18.028  23.051  57.730  1.00 35.55
ATOM   3223  O   TYR A 410      16.855  22.976  57.399  1.00 37.26
ATOM   3224  CB  TYR A 410      19.117  22.762  59.970  1.00 24.67
ATOM   3225  CG  TYR A 410      18.069  23.643  60.541  1.00 26.95
ATOM   3226  CD1 TYR A 410      16.861  23.112  60.990  1.00 28.10
ATOM   3227  CD2 TYR A 410      18.288  25.015  60.663  1.00 29.66
ATOM   3228  CE1 TYR A 410      15.883  23.924  61.571  1.00 26.98
ATOM   3229  CE2 TYR A 410      17.316  25.839  61.230  1.00 31.84
ATOM   3230  CZ  TYR A 410      16.112  25.294  61.685  1.00 37.49
ATOM   3231  OH  TYR A 410      15.156  26.110  62.241  1.00 33.48
ATOM   3232  N   VAL A 411      18.848  23.961  57.262  1.00 28.75
ATOM   3233  CA  VAL A 411      18.457  24.984  56.341  1.00 29.23
ATOM   3234  C   VAL A 411      18.013  24.469  54.992  1.00 34.00
ATOM   3235  O   VAL A 411      17.060  24.982  54.401  1.00 30.00
ATOM   3236  CB  VAL A 411      19.617  25.922  56.139  1.00 32.22
ATOM   3237  CG1 VAL A 411      19.331  26.821  54.950  1.00 29.86
ATOM   3238  CG2 VAL A 411      19.850  26.708  57.431  1.00 31.69
ATOM   3239  N   GLU A 412      18.730  23.479  54.488  1.00 33.14
ATOM   3240  CA  GLU A 412      18.402  22.900  53.217  1.00 31.91
ATOM   3241  C   GLU A 412      17.068  22.163  53.355  1.00 30.32
ATOM   3242  O   GLU A 412      16.182  22.225  52.531  1.00 31.89
ATOM   3243  CB  GLU A 412      19.502  21.883  52.932  1.00 36.48
ATOM   3244  CG  GLU A 412      20.443  22.174  51.737  1.00 67.01
ATOM   3245  CD  GLU A 412      21.872  21.699  51.962  1.00100.00
ATOM   3246  OE1 GLU A 412      22.193  20.782  52.716  1.00100.00
ATOM   3247  OE2 GLU A 412      22.750  22.396  51.277  1.00 94.73
ATOM   3248  N   LYS A 413      16.922  21.444  54.444  1.00 22.18
ATOM   3249  CA  LYS A 413      15.729  20.692  54.714  1.00 17.91
ATOM   3250  C   LYS A 413      14.463  21.486  54.855  1.00 23.75
ATOM   3251  O   LYS A 413      13.417  20.978  54.503  1.00 25.92
ATOM   3252  CB  LYS A 413      15.890  19.911  55.988  1.00 15.65
ATOM   3253  CG  LYS A 413      14.554  19.422  56.503  1.00 38.69
ATOM   3254  CD  LYS A 413      14.150  18.089  55.903  1.00 58.11
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ATOM   3255  CE  LYS A 413      13.634  17.099  56.937  1.00 64.98
ATOM   3256  NZ  LYS A 413      13.457  15.751  56.381  1.00 73.89
ATOM   3257  N   PHE A 414      14.530  22.688  55.424  1.00 25.40
ATOM   3258  CA  PHE A 414      13.316  23.479  55.640  1.00 27.80
ATOM   3259  C   PHE A 414      13.151  24.748  54.821  1.00 35.82
ATOM   3260  O   PHE A 414      12.276  25.557  55.122  1.00 35.17
ATOM   3261  CB  PHE A 414      13.063  23.791  57.118  1.00 30.46
ATOM   3262  CG  PHE A 414      12.936  22.553  57.964  1.00 33.88
ATOM   3263  CD1 PHE A 414      11.746  21.826  57.996  1.00 35.94
ATOM   3264  CD2 PHE A 414      14.005  22.110  58.742  1.00 37.75
ATOM   3265  CE1 PHE A 414      11.629  20.664  58.761  1.00 37.77
ATOM   3266  CE2 PHE A 414      13.888  20.962  59.526  1.00 42.23
ATOM   3267  CZ  PHE A 414      12.698  20.231  59.542  1.00 39.10
ATOM   3268  N   SER A 415      13.970  24.933  53.795  1.00 36.12
ATOM   3269  CA  SER A 415      13.858  26.115  52.945  1.00 36.36
ATOM   3270  C   SER A 415      12.412  26.295  52.510  1.00 38.99
ATOM   3271  O   SER A 415      11.730  25.315  52.243  1.00 41.04
ATOM   3272  CB  SER A 415      14.773  26.008  51.736  1.00 37.43
ATOM   3273  OG  SER A 415      16.036  26.566  52.046  1.00 46.73
ATOM   3274  N   TYR A 416      11.928  27.537  52.475  1.00 33.40
ATOM   3275  CA  TYR A 416      10.541  27.832  52.072  1.00 30.88
ATOM   3276  C   TYR A 416       9.453  27.183  52.947  1.00 33.62
ATOM   3277  O   TYR A 416       8.295  27.095  52.546  1.00 33.44
ATOM   3278  CB  TYR A 416      10.292  27.479  50.584  1.00 28.42
ATOM   3279  CG  TYR A 416      11.496  27.782  49.723  1.00 24.76
ATOM   3280  CD1 TYR A 416      11.791  29.087  49.338  1.00 26.55
ATOM   3281  CD2 TYR A 416      12.375  26.778  49.335  1.00 21.68
ATOM   3282  CE1 TYR A 416      12.914  29.384  48.570  1.00 25.16
ATOM   3283  CE2 TYR A 416      13.504  27.052  48.572  1.00 20.15
ATOM   3284  CZ  TYR A 416      13.780  28.360  48.189  1.00 30.62
ATOM   3285  OH  TYR A 416      14.892  28.616  47.399  1.00 35.15
ATOM   3286  N   LYS A 417       9.823  26.713  54.122  1.00 27.67
ATOM   3287  CA  LYS A 417       8.889  26.065  55.008  1.00 28.02
ATOM   3288  C   LYS A 417       8.733  26.830  56.317  1.00 31.36
ATOM   3289  O   LYS A 417       9.547  27.671  56.682  1.00 33.15
ATOM   3290  CB  LYS A 417       9.335  24.615  55.252  1.00 33.86
ATOM   3291  CG  LYS A 417       8.449  23.792  56.201  1.00 86.28
ATOM   3292  CD  LYS A 417       8.742  22.275  56.232  1.00100.00
ATOM   3293  CE  LYS A 417       7.924  21.471  57.265  1.00 72.28
ATOM   3294  NZ  LYS A 417       8.280  20.033  57.323  1.00 41.88
ATOM   3295  N   SER A 418       7.668  26.557  57.033  1.00 28.88
ATOM   3296  CA  SER A 418       7.455  27.195  58.335  1.00 30.04
ATOM   3297  C   SER A 418       7.425  26.064  59.332  1.00 34.09
ATOM   3298  O   SER A 418       6.614  25.145  59.193  1.00 31.54
ATOM   3299  CB  SER A 418       6.261  28.126  58.410  1.00 31.46
ATOM   3300  OG  SER A 418       6.417  29.106  57.399  1.00 35.01
ATOM   3301  N   ILE A 419       8.356  26.077  60.281  1.00 28.50
ATOM   3302  CA  ILE A 419       8.446  24.971  61.205  1.00 23.86
ATOM   3303  C   ILE A 419       8.272  25.342  62.641  1.00 25.06
ATOM   3304  O   ILE A 419       8.122  26.500  63.002  1.00 21.64
ATOM   3305  CB  ILE A 419       9.803  24.314  61.026  1.00 25.02
ATOM   3306  CG1 ILE A 419      10.863  25.325  61.399  1.00 23.63
ATOM   3307  CG2 ILE A 419      10.051  23.937  59.565  1.00 23.22
ATOM   3308  CD1 ILE A 419      12.236  24.688  61.253  1.00 23.48
ATOM   3309  N   THR A 420       8.321  24.302  63.455  1.00 24.71
ATOM   3310  CA  THR A 420       8.201  24.417  64.895  1.00 24.36
ATOM   3311  C   THR A 420       9.416  23.795  65.538  1.00 28.90
ATOM   3312  O   THR A 420      10.190  23.112  64.863  1.00 23.38
ATOM   3313  CB  THR A 420       6.979  23.691  65.448  1.00 24.92
ATOM   3314  OG1 THR A 420       7.190  22.313  65.291  1.00 26.43
ATOM   3315  CG2 THR A 420       5.728  24.082  64.694  1.00 31.57
ATOM   3316  N   THR A 421       9.542  24.051  66.855  1.00 29.30
ATOM   3317  CA  THR A 421      10.610  23.549  67.709  1.00 27.78
ATOM   3318  C   THR A 421      10.831  22.035  67.585  1.00 30.99
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ATOM   3319  O   THR A 421      11.975  21.594  67.489  1.00 33.28
ATOM   3320  CB  THR A 421      10.394  23.969  69.166  1.00 21.94
ATOM   3321  OG1 THR A 421      10.567  25.369  69.263  1.00 24.52
ATOM   3322  CG2 THR A 421      11.399  23.221  70.045  1.00 20.12
ATOM   3323  N   ASP A 422       9.721  21.272  67.575  1.00 21.94
ATOM   3324  CA  ASP A 422       9.706  19.823  67.430  1.00 21.08
ATOM   3325  C   ASP A 422      10.323  19.401  66.104  1.00 31.16
ATOM   3326  O   ASP A 422      11.110  18.427  66.027  1.00 31.95
ATOM   3327  CB  ASP A 422       8.276  19.278  67.561  1.00 19.49
ATOM   3328  CG  ASP A 422       8.236  17.802  67.298  1.00 31.85
ATOM   3329  OD1 ASP A 422       9.130  17.040  67.654  1.00 29.73
ATOM   3330  OD2 ASP A 422       7.197  17.415  66.598  1.00 56.60
ATOM   3331  N   ASP A 423       9.957  20.146  65.049  1.00 26.75
ATOM   3332  CA  ASP A 423      10.505  19.876  63.729  1.00 26.01
ATOM   3333  C   ASP A 423      12.027  19.957  63.830  1.00 40.09
ATOM   3334  O   ASP A 423      12.753  19.020  63.500  1.00 47.09
ATOM   3335  CB  ASP A 423      10.000  20.833  62.631  1.00 24.86
ATOM   3336  CG  ASP A 423       8.538  20.722  62.343  1.00 39.90
ATOM   3337  OD1 ASP A 423       7.968  19.649  62.299  1.00 45.03
ATOM   3338  OD2 ASP A 423       7.943  21.887  62.113  1.00 40.43
ATOM   3339  N   TRP A 424      12.493  21.099  64.320  1.00 31.92
ATOM   3340  CA  TRP A 424      13.903  21.372  64.495  1.00 29.69
ATOM   3341  C   TRP A 424      14.611  20.271  65.282  1.00 33.81
ATOM   3342  O   TRP A 424      15.537  19.616  64.824  1.00 35.87
ATOM   3343  CB  TRP A 424      14.056  22.711  65.239  1.00 26.11
ATOM   3344  CG  TRP A 424      15.431  22.869  65.786  1.00 27.05
ATOM   3345  CD1 TRP A 424      16.518  23.302  65.101  1.00 29.65
ATOM   3346  CD2 TRP A 424      15.885  22.587  67.119  1.00 26.62
ATOM   3347  NE1 TRP A 424      17.612  23.321  65.922  1.00 27.83
ATOM   3348  CE2 TRP A 424      17.257  22.891  67.163  1.00 28.62
ATOM   3349  CE3 TRP A 424      15.260  22.138  68.269  1.00 29.69
ATOM   3350  CZ2 TRP A 424      18.010  22.758  68.319  1.00 29.28
ATOM   3351  CZ3 TRP A 424      16.000  21.993  69.429  1.00 33.50
ATOM   3352  CH2 TRP A 424      17.362  22.317  69.459  1.00 33.93
ATOM   3353  N   LYS A 425      14.156  20.090  66.497  1.00 28.75
ATOM   3354  CA  LYS A 425      14.723  19.105  67.373  1.00 29.43
ATOM   3355  C   LYS A 425      14.697  17.691  66.808  1.00 29.49
ATOM   3356  O   LYS A 425      15.627  16.928  67.030  1.00 27.65
ATOM   3357  CB  LYS A 425      14.078  19.171  68.744  1.00 29.70
ATOM   3358  CG  LYS A 425      14.860  18.414  69.787  1.00 28.11
ATOM   3359  CD  LYS A 425      14.161  18.409  71.132  1.00 23.57
ATOM   3360  CE  LYS A 425      14.300  17.063  71.815  1.00 36.16
ATOM   3361  NZ  LYS A 425      13.042  16.302  71.768  1.00 58.08
ATOM   3362  N   ASP A 426      13.606  17.361  66.107  1.00 19.05
ATOM   3363  CA  ASP A 426      13.417  16.070  65.516  1.00 18.43
ATOM   3364  C   ASP A 426      14.453  15.879  64.387  1.00 28.33
ATOM   3365  O   ASP A 426      15.070  14.832  64.232  1.00 31.25
ATOM   3366  CB  ASP A 426      11.920  15.840  65.098  1.00 19.79
ATOM   3367  CG  ASP A 426      10.998  15.575  66.274  1.00 25.54
ATOM   3368  OD1 ASP A 426      11.341  15.466  67.409  1.00 29.73
ATOM   3369  OD2 ASP A 426       9.804  15.611  65.938  1.00 20.67
ATOM   3370  N   PHE A 427      14.674  16.926  63.612  1.00 25.09
ATOM   3371  CA  PHE A 427      15.654  16.899  62.540  1.00 25.81
ATOM   3372  C   PHE A 427      17.066  16.718  63.159  1.00 34.01
ATOM   3373  O   PHE A 427      17.843  15.851  62.773  1.00 36.25
ATOM   3374  CB  PHE A 427      15.589  18.197  61.704  1.00 26.35
ATOM   3375  CG  PHE A 427      16.698  18.202  60.702  1.00 27.40
ATOM   3376  CD1 PHE A 427      16.714  17.247  59.686  1.00 29.97
ATOM   3377  CD2 PHE A 427      17.773  19.084  60.805  1.00 28.71
ATOM   3378  CE1 PHE A 427      17.730  17.194  58.733  1.00 27.72
ATOM   3379  CE2 PHE A 427      18.806  19.046  59.867  1.00 30.37
ATOM   3380  CZ  PHE A 427      18.780  18.104  58.837  1.00 26.34
ATOM   3381  N   LEU A 428      17.369  17.544  64.160  1.00 28.94
ATOM   3382  CA  LEU A 428      18.622  17.496  64.924  1.00 27.74
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ATOM	3383	C	LEU	A	428	18.989	16.047	65.303	1.00	32.08
ATOM	3384	O	LEU	A	428	20.145	15.647	65.209	1.00	36.38
ATOM	3385	CB	LEU	A	428	18.510	18.362	66.223	1.00	24.68
ATOM	3386	CG	LEU	A	428	19.778	18.377	67.079	1.00	24.30
ATOM	3387	CD1	LEU	A	428	20.855	19.278	66.467	1.00	23.00
ATOM	3388	CD2	LEU	A	428	19.446	18.856	68.481	1.00	16.41
ATOM	3389	N	TYR	A	429	17.991	15.271	65.735	1.00	23.71
ATOM	3390	CA	TYR	A	429	18.148	13.896	66.144	1.00	23.18
ATOM	3391	C	TYR	A	429	18.311	12.967	64.976	1.00	26.62
ATOM	3392	O	TYR	A	429	18.911	11.910	65.076	1.00	28.43
ATOM	3393	CB	TYR	A	429	16.921	13.453	66.914	1.00	25.59
ATOM	3394	CG	TYR	A	429	17.069	13.526	68.414	1.00	29.53
ATOM	3395	CD1	TYR	A	429	16.823	14.714	69.114	1.00	31.11
ATOM	3396	CD2	TYR	A	429	17.361	12.383	69.156	1.00	32.70
ATOM	3397	CE1	TYR	A	429	16.916	14.769	70.510	1.00	32.23
ATOM	3398	CE2	TYR	A	429	17.485	12.420	70.551	1.00	35.30
ATOM	3399	CZ	TYR	A	429	17.251	13.623	71.231	1.00	41.02
ATOM	3400	OH	TYR	A	429	17.339	13.679	72.609	1.00	30.02
ATOM	3401	N	SER	A	430	17.748	13.342	63.854	1.00	21.68
ATOM	3402	CA	SER	A	430	17.914	12.469	62.730	1.00	23.42
ATOM	3403	C	SER	A	430	19.264	12.722	62.050	1.00	32.87
ATOM	3404	O	SER	A	430	19.879	11.819	61.467	1.00	35.11
ATOM	3405	CB	SER	A	430	16.756	12.541	61.773	1.00	28.79
ATOM	3406	OG	SER	A	430	17.089	13.475	60.777	1.00	49.56
ATOM	3407	N	TYR	A	431	19.748	13.955	62.132	1.00	27.18
ATOM	3408	CA	TYR	A	431	21.017	14.296	61.537	1.00	27.14
ATOM	3409	C	TYR	A	431	22.152	13.702	62.316	1.00	32.52
ATOM	3410	O	TYR	A	431	23.155	13.242	61.771	1.00	33.64
ATOM	3411	CB	TYR	A	431	21.216	15.818	61.385	1.00	31.07
ATOM	3412	CG	TYR	A	431	22.566	16.265	60.812	1.00	35.63
ATOM	3413	CD1	TYR	A	431	23.663	16.492	61.650	1.00	36.88
ATOM	3414	CD2	TYR	A	431	22.735	16.496	59.444	1.00	36.92
ATOM	3415	CE1	TYR	A	431	24.894	16.924	61.157	1.00	33.78
ATOM	3416	CE2	TYR	A	431	23.964	16.916	58.924	1.00	37.86
ATOM	3417	CZ	TYR	A	431	25.038	17.143	59.786	1.00	46.01
ATOM	3418	OH	TYR	A	431	26.247	17.573	59.294	1.00	51.28
ATOM	3419	N	PHE	A	432	21.964	13.728	63.606	1.00	29.66
ATOM	3420	CA	PHE	A	432	22.939	13.215	64.526	1.00	29.12
ATOM	3421	C	PHE	A	432	22.522	11.865	65.007	1.00	42.64
ATOM	3422	O	PHE	A	432	22.499	11.593	66.197	1.00	46.77
ATOM	3423	CB	PHE	A	432	23.063	14.157	65.719	1.00	30.24
ATOM	3424	CG	PHE	A	432	23.962	15.327	65.401	1.00	33.03
ATOM	3425	CD1	PHE	A	432	25.336	15.113	65.277	1.00	37.22
ATOM	3426	CD2	PHE	A	432	23.470	16.624	65.232	1.00	30.70
ATOM	3427	CE1	PHE	A	432	26.223	16.153	64.999	1.00	34.27
ATOM	3428	CE2	PHE	A	432	24.349	17.667	64.938	1.00	31.71
ATOM	3429	CZ	PHE	A	432	25.722	17.438	64.823	1.00	27.82
ATOM	3430	N	LYS	A	433	22.174	11.029	64.063	1.00	42.50
ATOM	3431	CA	LYS	A	433	21.669	9.670	64.270	1.00	40.87
ATOM	3432	C	LYS	A	433	22.718	8.751	64.908	1.00	46.17
ATOM	3433	O	LYS	A	433	22.405	7.734	65.513	1.00	48.48
ATOM	3434	CB	LYS	A	433	21.245	9.106	62.917	1.00	39.25
ATOM	3435	CG	LYS	A	433	19.988	8.241	63.017	1.00	84.17
ATOM	3436	CD	LYS	A	433	18.925	8.660	62.000	1.00	100.00
ATOM	3437	CE	LYS	A	433	17.523	8.172	62.384	1.00	100.00
ATOM	3438	NZ	LYS	A	433	16.525	9.119	61.884	1.00	100.00
ATOM	3439	N	ASP	A	434	24.002	9.112	64.697	1.00	45.20
ATOM	3440	CA	ASP	A	434	25.083	8.349	65.321	1.00	47.80
ATOM	3441	C	ASP	A	434	25.201	8.684	66.802	1.00	50.78
ATOM	3442	O	ASP	A	434	25.474	7.845	67.653	1.00	55.76
ATOM	3443	CB	ASP	A	434	26.405	8.567	64.562	1.00	53.91
ATOM	3444	CG	ASP	A	434	26.123	8.474	63.069	1.00	93.32
ATOM	3445	OD1	ASP	A	434	25.744	7.573	62.325	1.00	96.22
ATOM	3446	OD2	ASP	A	434	26.119	9.664	62.753	1.00	100.00

ATOM	3447	N	LYS	A	435	25.015	9.978	67.085	1.00 38.82
ATOM	3448	CA	LYS	A	435	24.974	10.404	68.468	1.00 34.57
ATOM	3449	C	LYS	A	435	23.549	10.749	68.881	1.00 39.87
ATOM	3450	O	LYS	A	435	23.070	11.840	68.693	1.00 40.34
ATOM	3451	CB	LYS	A	435	25.864	11.631	68.615	1.00 34.69
ATOM	3452	CG	LYS	A	435	27.064	11.595	67.679	1.00 40.86
ATOM	3453	CD	LYS	A	435	27.703	12.975	67.532	1.00 51.04
ATOM	3454	CE	LYS	A	435	29.242	12.904	67.557	1.00 24.08
ATOM	3455	NZ	LYS	A	435	29.822	13.990	66.760	1.00 45.26
ATOM	3456	N	VAL	A	436	22.843	9.728	69.414	1.00 38.07
ATOM	3457	CA	VAL	A	436	21.601	10.036	70.111	1.00 36.86
ATOM	3458	C	VAL	A	436	21.846	10.129	71.608	1.00 44.88
ATOM	3459	O	VAL	A	436	21.289	10.948	72.300	1.00 46.42
ATOM	3460	CB	VAL	A	436	20.567	8.923	69.816	1.00 37.37
ATOM	3461	CG1	VAL	A	436	19.944	9.143	68.446	1.00 36.24
ATOM	3462	CG2	VAL	A	436	21.227	7.556	69.854	1.00 36.80
ATOM	3463	N	ASP	A	437	22.718	9.232	72.099	1.00 43.61
ATOM	3464	CA	ASP	A	437	23.044	9.222	73.522	1.00 41.43
ATOM	3465	C	ASP	A	437	23.657	10.546	73.958	1.00 45.71
ATOM	3466	O	ASP	A	437	23.554	10.956	75.107	1.00 49.89
ATOM	3467	CB	ASP	A	437	24.022	8.082	73.776	1.00 43.84
ATOM	3468	CG	ASP	A	437	23.281	6.752	73.691	1.00 72.47
ATOM	3469	OD1	ASP	A	437	22.062	6.769	73.823	1.00 74.64
ATOM	3470	OD2	ASP	A	437	23.933	5.730	73.481	1.00 86.09
ATOM	3471	N	VAL	A	438	24.333	11.324	73.122	1.00 40.21
ATOM	3472	CA	VAL	A	438	24.807	12.624	73.577	1.00 40.97
ATOM	3473	C	VAL	A	438	23.621	13.582	73.668	1.00 41.86
ATOM	3474	O	VAL	A	438	23.368	14.276	74.657	1.00 39.95
ATOM	3475	CB	VAL	A	438	25.875	13.165	72.615	1.00 47.47
ATOM	3476	CG1	VAL	A	438	26.438	14.523	73.051	1.00 47.51
ATOM	3477	CG2	VAL	A	438	26.996	12.149	72.440	1.00 47.51
ATOM	3478	N	LEU	A	439	22.876	13.595	72.585	1.00 37.91
ATOM	3479	CA	LEU	A	439	21.729	14.442	72.507	1.00 36.21
ATOM	3480	C	LEU	A	439	20.850	14.190	73.695	1.00 40.03
ATOM	3481	O	LEU	A	439	20.214	15.064	74.255	1.00 42.22
ATOM	3482	CB	LEU	A	439	20.949	14.180	71.210	1.00 33.84
ATOM	3483	CG	LEU	A	439	21.552	14.939	70.039	1.00 32.80
ATOM	3484	CD1	LEU	A	439	20.813	14.538	68.775	1.00 34.08
ATOM	3485	CD2	LEU	A	439	21.435	16.434	70.258	1.00 23.80
ATOM	3486	N	ASN	A	440	20.810	12.953	74.076	1.00 34.03
ATOM	3487	CA	ASN	A	440	19.971	12.603	75.187	1.00 34.00
ATOM	3488	C	ASN	A	440	20.494	13.093	76.532	1.00 40.95
ATOM	3489	O	ASN	A	440	19.816	12.995	77.544	1.00 42.09
ATOM	3490	CB	ASN	A	440	19.681	11.095	75.178	1.00 24.89
ATOM	3491	CG	ASN	A	440	18.790	10.635	74.028	1.00 46.52
ATOM	3492	OD1	ASN	A	440	19.005	9.537	73.480	1.00 58.82
ATOM	3493	ND2	ASN	A	440	17.769	11.440	73.680	1.00 31.11
ATOM	3494	N	GLN	A	441	21.707	13.623	76.531	1.00 36.98
ATOM	3495	CA	GLN	A	441	22.339	14.095	77.744	1.00 35.47
ATOM	3496	C	GLN	A	441	21.879	15.478	78.067	1.00 36.00
ATOM	3497	O	GLN	A	441	22.137	16.029	79.142	1.00 34.96
ATOM	3498	CB	GLN	A	441	23.878	14.109	77.581	1.00 38.10
ATOM	3499	CG	GLN	A	441	24.504	12.692	77.422	1.00 52.06
ATOM	3500	CD	GLN	A	441	25.954	12.730	76.955	1.00 81.69
ATOM	3501	OE1	GLN	A	441	26.476	13.796	76.609	1.00 74.46
ATOM	3502	NE2	GLN	A	441	26.616	11.574	76.972	1.00 91.09
ATOM	3503	N	VAL	A	442	21.197	16.067	77.112	1.00 31.86
ATOM	3504	CA	VAL	A	442	20.753	17.411	77.384	1.00 32.78
ATOM	3505	C	VAL	A	442	19.354	17.468	77.970	1.00 38.24
ATOM	3506	O	VAL	A	442	18.468	16.700	77.588	1.00 42.83
ATOM	3507	CB	VAL	A	442	20.845	18.277	76.159	1.00 34.84
ATOM	3508	CG1	VAL	A	442	21.430	17.435	75.020	1.00 34.65
ATOM	3509	CG2	VAL	A	442	19.441	18.705	75.811	1.00 33.21
ATOM	3510	N	ASP	A	443	19.172	18.388	78.908	1.00 25.60

ATOM	3511	CA	ASP	A	443	17.931	18.634	79.616	1.00 24.57
ATOM	3512	C	ASP	A	443	16.996	19.533	78.791	1.00 32.14
ATOM	3513	O	ASP	A	443	16.744	20.732	79.073	1.00 34.77
ATOM	3514	CB	ASP	A	443	18.332	19.272	80.957	1.00 27.11
ATOM	3515	CG	ASP	A	443	17.216	19.413	81.901	1.00 39.99
ATOM	3516	OD1	ASP	A	443	16.063	19.234	81.573	1.00 44.78
ATOM	3517	OD2	ASP	A	443	17.631	19.753	83.094	1.00 56.66
ATOM	3518	N	TRP	A	444	16.525	18.914	77.722	1.00 28.30
ATOM	3519	CA	TRP	A	444	15.614	19.507	76.757	1.00 26.27
ATOM	3520	C	TRP	A	444	14.460	20.296	77.416	1.00 31.52
ATOM	3521	O	TRP	A	444	14.102	21.409	76.988	1.00 34.63
ATOM	3522	CB	TRP	A	444	15.067	18.398	75.799	1.00 21.47
ATOM	3523	CG	TRP	A	444	16.095	17.951	74.806	1.00 22.03
ATOM	3524	CD1	TRP	A	444	16.675	16.718	74.736	1.00 25.16
ATOM	3525	CD2	TRP	A	444	16.733	18.738	73.776	1.00 20.36
ATOM	3526	NE1	TRP	A	444	17.623	16.677	73.738	1.00 23.97
ATOM	3527	CE2	TRP	A	444	17.688	17.906	73.138	1.00 24.71
ATOM	3528	CE3	TRP	A	444	16.596	20.045	73.342	1.00 20.86
ATOM	3529	CZ2	TRP	A	444	18.448	18.345	72.060	1.00 24.51
ATOM	3530	CZ3	TRP	A	444	17.353	20.471	72.264	1.00 22.88
ATOM	3531	CH2	TRP	A	444	18.281	19.643	71.643	1.00 23.48
ATOM	3532	N	ASN	A	445	13.855	19.711	78.457	1.00 24.92
ATOM	3533	CA	ASN	A	445	12.723	20.326	79.113	1.00 26.30
ATOM	3534	C	ASN	A	445	13.040	21.677	79.729	1.00 30.17
ATOM	3535	O	ASN	A	445	12.291	22.660	79.547	1.00 31.86
ATOM	3536	CB	ASN	A	445	11.987	19.382	80.094	1.00 40.83
ATOM	3537	CG	ASN	A	445	10.946	20.033	81.020	1.00 87.07
ATOM	3538	OD1	ASN	A	445	11.271	20.635	82.065	1.00 86.38
ATOM	3539	ND2	ASN	A	445	9.670	19.848	80.688	1.00 71.65
ATOM	3540	N	ALA	A	446	14.147	21.687	80.436	1.00 22.70
ATOM	3541	CA	ALA	A	446	14.583	22.886	81.073	1.00 24.45
ATOM	3542	C	ALA	A	446	14.886	23.896	79.990	1.00 30.52
ATOM	3543	O	ALA	A	446	14.324	25.001	79.936	1.00 33.92
ATOM	3544	CB	ALA	A	446	15.814	22.543	81.900	1.00 25.68
ATOM	3545	N	TRP	A	447	15.776	23.494	79.102	1.00 25.24
ATOM	3546	CA	TRP	A	447	16.162	24.384	78.034	1.00 26.83
ATOM	3547	C	TRP	A	447	14.989	24.912	77.223	1.00 31.32
ATOM	3548	O	TRP	A	447	14.971	26.089	76.875	1.00 30.48
ATOM	3549	CB	TRP	A	447	17.166	23.725	77.062	1.00 25.78
ATOM	3550	CG	TRP	A	447	18.625	23.815	77.421	1.00 26.60
ATOM	3551	CD1	TRP	A	447	19.343	22.840	78.046	1.00 28.89
ATOM	3552	CD2	TRP	A	447	19.554	24.896	77.165	1.00 26.16
ATOM	3553	NE1	TRP	A	447	20.654	23.217	78.197	1.00 27.23
ATOM	3554	CE2	TRP	A	447	20.822	24.476	77.660	1.00 29.00
ATOM	3555	CE3	TRP	A	447	19.435	26.162	76.607	1.00 27.56
ATOM	3556	CZ2	TRP	A	447	21.954	25.290	77.583	1.00 27.95
ATOM	3557	CZ3	TRP	A	447	20.554	26.966	76.538	1.00 29.93
ATOM	3558	CH2	TRP	A	447	21.792	26.539	77.035	1.00 30.16
ATOM	3559	N	LEU	A	448	14.029	24.034	76.893	1.00 26.54
ATOM	3560	CA	LEU	A	448	12.896	24.421	76.052	1.00 26.92
ATOM	3561	C	LEU	A	448	11.734	25.064	76.779	1.00 36.15
ATOM	3562	O	LEU	A	448	11.089	26.031	76.304	1.00 31.19
ATOM	3563	CB	LEU	A	448	12.338	23.197	75.307	1.00 25.26
ATOM	3564	CG	LEU	A	448	13.311	22.545	74.332	1.00 28.29
ATOM	3565	CD1	LEU	A	448	12.597	21.455	73.530	1.00 30.49
ATOM	3566	CD2	LEU	A	448	13.879	23.576	73.375	1.00 21.94
ATOM	3567	N	TYR	A	449	11.472	24.455	77.924	1.00 33.14
ATOM	3568	CA	TYR	A	449	10.373	24.835	78.747	1.00 30.64
ATOM	3569	C	TYR	A	449	10.646	25.525	80.041	1.00 34.31
ATOM	3570	O	TYR	A	449	9.750	26.191	80.529	1.00 41.98
ATOM	3571	CB	TYR	A	449	9.400	23.674	78.916	1.00 29.14
ATOM	3572	CG	TYR	A	449	9.212	23.089	77.556	1.00 26.50
ATOM	3573	CD1	TYR	A	449	8.762	23.869	76.485	1.00 24.36
ATOM	3574	CD2	TYR	A	449	9.560	21.762	77.325	1.00 28.48

ATOM	3575	CE1	TYR	A	449	8.626	23.331	75.202	1.00 17.56
ATOM	3576	CE2	TYR	A	449	9.427	21.205	76.054	1.00 29.93
ATOM	3577	CZ	TYR	A	449	8.959	21.988	74.998	1.00 33.65
ATOM	3578	OH	TYR	A	449	8.840	21.415	73.762	1.00 39.47
ATOM	3579	N	SER	A	450	11.806	25.413	80.644	1.00 22.72
ATOM	3580	CA	SER	A	450	11.902	26.149	81.900	1.00 21.21
ATOM	3581	C	SER	A	450	12.278	27.625	81.749	1.00 23.98
ATOM	3582	O	SER	A	450	12.966	28.035	80.810	1.00 27.17
ATOM	3583	CB	SER	A	450	12.666	25.436	83.010	1.00 24.83
ATOM	3584	OG	SER	A	450	12.540	24.046	82.871	1.00 36.29
ATOM	3585	N	PRO	A	451	11.806	28.430	82.689	1.00 19.76
ATOM	3586	CA	PRO	A	451	12.111	29.840	82.669	1.00 18.20
ATOM	3587	C	PRO	A	451	13.461	29.988	83.271	1.00 21.72
ATOM	3588	O	PRO	A	451	14.022	29.015	83.742	1.00 24.34
ATOM	3589	CB	PRO	A	451	11.185	30.485	83.695	1.00 18.85
ATOM	3590	CG	PRO	A	451	10.836	29.390	84.677	1.00 23.13
ATOM	3591	CD	PRO	A	451	11.002	28.078	83.900	1.00 19.61
ATOM	3592	N	GLY	A	452	13.959	31.212	83.307	1.00 18.97
ATOM	3593	CA	GLY	A	452	15.241	31.444	83.922	1.00 19.09
ATOM	3594	C	GLY	A	452	16.382	31.107	83.016	1.00 26.20
ATOM	3595	O	GLY	A	452	16.191	30.916	81.819	1.00 27.37
ATOM	3596	N	LEU	A	453	17.557	31.057	83.650	1.00 25.48
ATOM	3597	CA	LEU	A	453	18.843	30.750	83.029	1.00 25.32
ATOM	3598	C	LEU	A	453	18.906	29.322	82.629	1.00 26.21
ATOM	3599	O	LEU	A	453	18.400	28.458	83.322	1.00 25.04
ATOM	3600	CB	LEU	A	453	20.042	31.119	83.938	1.00 25.46
ATOM	3601	CG	LEU	A	453	20.280	32.632	83.904	1.00 31.82
ATOM	3602	CD1	LEU	A	453	21.019	33.087	85.119	1.00 31.78
ATOM	3603	CD2	LEU	A	453	21.046	33.056	82.651	1.00 41.50
ATOM	3604	N	PRO	A	454	19.510	29.082	81.489	1.00 22.97
ATOM	3605	CA	PRO	A	454	19.585	27.747	81.003	1.00 21.60
ATOM	3606	C	PRO	A	454	20.145	26.890	82.075	1.00 26.94
ATOM	3607	O	PRO	A	454	20.923	27.359	82.893	1.00 29.09
ATOM	3608	CB	PRO	A	454	20.489	27.780	79.768	1.00 22.34
ATOM	3609	CG	PRO	A	454	20.777	29.232	79.470	1.00 23.69
ATOM	3610	CD	PRO	A	454	20.136	30.054	80.556	1.00 20.82
ATOM	3611	N	PRO	A	455	19.721	25.648	82.067	1.00 25.61
ATOM	3612	CA	PRO	A	455	20.167	24.683	83.031	1.00 24.27
ATOM	3613	C	PRO	A	455	21.661	24.568	82.991	1.00 30.95
ATOM	3614	O	PRO	A	455	22.225	24.062	83.920	1.00 33.47
ATOM	3615	CB	PRO	A	455	19.631	23.320	82.592	1.00 25.04
ATOM	3616	CG	PRO	A	455	19.149	23.497	81.162	1.00 33.02
ATOM	3617	CD	PRO	A	455	19.111	25.005	80.888	1.00 28.49
ATOM	3618	N	ILE	A	456	22.305	25.002	81.911	1.00 27.91
ATOM	3619	CA	ILE	A	456	23.764	24.893	81.821	1.00 27.82
ATOM	3620	C	ILE	A	456	24.395	26.057	81.077	1.00 34.73
ATOM	3621	O	ILE	A	456	23.737	26.769	80.293	1.00 37.01
ATOM	3622	CB	ILE	A	456	24.228	23.540	81.259	1.00 31.34
ATOM	3623	CG1	ILE	A	456	25.721	23.305	81.417	1.00 29.78
ATOM	3624	CG2	ILE	A	456	23.865	23.369	79.788	1.00 32.96
ATOM	3625	CD1	ILE	A	456	26.054	21.852	81.116	1.00 23.94
ATOM	3626	N	LYS	A	457	25.680	26.252	81.334	1.00 30.52
ATOM	3627	CA	LYS	A	457	26.405	27.335	80.707	1.00 30.21
ATOM	3628	C	LYS	A	457	27.515	26.808	79.835	1.00 32.14
ATOM	3629	O	LYS	A	457	28.328	26.037	80.273	1.00 33.07
ATOM	3630	CB	LYS	A	457	26.953	28.264	81.749	1.00 32.38
ATOM	3631	CG	LYS	A	457	27.818	29.327	81.121	1.00 34.64
ATOM	3632	CD	LYS	A	457	28.288	30.306	82.166	1.00 13.41
ATOM	3633	CE	LYS	A	457	28.803	31.596	81.565	1.00 18.04
ATOM	3634	NZ	LYS	A	457	28.974	32.643	82.595	1.00 26.77
ATOM	3635	N	PRO	A	458	27.567	27.208	78.589	1.00 27.50
ATOM	3636	CA	PRO	A	458	28.630	26.675	77.737	1.00 26.85
ATOM	3637	C	PRO	A	458	29.994	27.147	78.185	1.00 26.89
ATOM	3638	O	PRO	A	458	30.128	27.876	79.167	1.00 24.86

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ATOM   3639  CB  PRO A 458      28.335  27.191  76.316  1.00 29.41
ATOM   3640  CG  PRO A 458      26.952  27.864  76.375  1.00 33.24
ATOM   3641  CD  PRO A 458      26.574  28.044  77.848  1.00 26.12
ATOM   3642  N   ASN A 459      31.005  26.754  77.440  1.00 22.13
ATOM   3643  CA  ASN A 459      32.359  27.191  77.735  1.00 22.29
ATOM   3644  C   ASN A 459      32.751  28.325  76.820  1.00 30.27
ATOM   3645  O   ASN A 459      32.451  28.296  75.617  1.00 32.89
ATOM   3646  CB  ASN A 459      33.315  26.060  77.494  1.00 25.03
ATOM   3647  CG  ASN A 459      32.766  24.846  78.155  1.00 49.54
ATOM   3648  OD1 ASN A 459      32.618  24.822  79.383  1.00 50.09
ATOM   3649  ND2 ASN A 459      32.411  23.870  77.332  1.00 38.39
ATOM   3650  N   TYR A 460      33.448  29.316  77.380  1.00 25.58
ATOM   3651  CA  TYR A 460      33.851  30.493  76.625  1.00 23.89
ATOM   3652  C   TYR A 460      35.298  30.853  76.745  1.00 34.20
ATOM   3653  O   TYR A 460      35.849  30.862  77.839  1.00 35.27
ATOM   3654  CB  TYR A 460      33.120  31.708  77.171  1.00 24.38
ATOM   3655  CG  TYR A 460      31.636  31.631  77.024  1.00 26.98
ATOM   3656  CD1 TYR A 460      31.029  32.011  75.829  1.00 30.69
ATOM   3657  CD2 TYR A 460      30.838  31.168  78.064  1.00 25.70
ATOM   3658  CE1 TYR A 460      29.644  31.952  75.684  1.00 28.77
ATOM   3659  CE2 TYR A 460      29.453  31.096  77.938  1.00 25.24
ATOM   3660  CZ  TYR A 460      28.863  31.496  76.741  1.00 24.49
ATOM   3661  OH  TYR A 460      27.519  31.443  76.587  1.00 28.39
ATOM   3662  N   ASP A 461      35.893  31.227  75.616  1.00 30.58
ATOM   3663  CA  ASP A 461      37.268  31.640  75.654  1.00 27.51
ATOM   3664  C   ASP A 461      37.319  32.941  76.464  1.00 23.53
ATOM   3665  O   ASP A 461      36.377  33.704  76.396  1.00 26.62
ATOM   3666  CB  ASP A 461      37.821  31.784  74.218  1.00 27.30
ATOM   3667  CG  ASP A 461      39.137  32.466  74.260  1.00 32.53
ATOM   3668  OD1 ASP A 461      39.262  33.672  74.334  1.00 39.66
ATOM   3669  OD2 ASP A 461      40.130  31.628  74.306  1.00 44.34
ATOM   3670  N   MET A 462      38.375  33.234  77.224  1.00 17.26
ATOM   3671  CA  MET A 462      38.396  34.511  78.008  1.00 18.66
ATOM   3672  C   MET A 462      39.299  35.634  77.485  1.00 24.02
ATOM   3673  O   MET A 462      39.336  36.738  78.011  1.00 24.56
ATOM   3674  CB  MET A 462      38.818  34.186  79.431  1.00 22.99
ATOM   3675  CG  MET A 462      37.808  33.209  80.025  1.00 28.98
ATOM   3676  SD  MET A 462      36.166  33.969  79.951  1.00 33.22
ATOM   3677  CE  MET A 462      36.420  35.300  81.153  1.00 27.89
ATOM   3678  N   THR A 463      40.067  35.348  76.461  1.00 22.57
ATOM   3679  CA  THR A 463      41.015  36.285  75.911  1.00 22.64
ATOM   3680  C   THR A 463      40.690  37.738  75.961  1.00 33.12
ATOM   3681  O   THR A 463      41.372  38.493  76.640  1.00 35.27
ATOM   3682  CB  THR A 463      41.574  35.929  74.536  1.00 29.80
ATOM   3683  OG1 THR A 463      41.939  34.576  74.509  1.00 26.74
ATOM   3684  CG2 THR A 463      42.797  36.793  74.224  1.00 18.79
ATOM   3685  N   LEU A 464      39.700  38.141  75.177  1.00 30.50
ATOM   3686  CA  LEU A 464      39.293  39.533  75.061  1.00 29.15
ATOM   3687  C   LEU A 464      38.490  40.067  76.216  1.00 34.24
ATOM   3688  O   LEU A 464      38.439  41.270  76.422  1.00 37.12
ATOM   3689  CB  LEU A 464      38.537  39.767  73.743  1.00 29.20
ATOM   3690  CG  LEU A 464      39.393  39.394  72.527  1.00 33.73
ATOM   3691  CD1 LEU A 464      38.609  39.565  71.217  1.00 32.72
ATOM   3692  CD2 LEU A 464      40.648  40.261  72.499  1.00 26.22
ATOM   3693  N   THR A 465      37.855  39.167  76.964  1.00 30.71
ATOM   3694  CA  THR A 465      37.005  39.496  78.103  1.00 28.58
ATOM   3695  C   THR A 465      37.800  39.893  79.324  1.00 30.69
ATOM   3696  O   THR A 465      37.530  40.865  80.030  1.00 31.27
ATOM   3697  CB  THR A 465      36.016  38.328  78.372  1.00 35.85
ATOM   3698  OG1 THR A 465      35.101  38.212  77.296  1.00 50.93
ATOM   3699  CG2 THR A 465      35.255  38.451  79.690  1.00 26.34
ATOM   3700  N   ASN A 466      38.802  39.111  79.568  1.00 24.40
ATOM   3701  CA  ASN A 466      39.635  39.375  80.688  1.00 23.11
ATOM   3702  C   ASN A 466      39.899  40.856  80.967  1.00 28.37
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ATOM	3703	O	ASN	A	466	39.763	41.270	82.120	1.00 27.03
ATOM	3704	CB	ASN	A	466	40.921	38.543	80.629	1.00 20.30
ATOM	3705	CG	ASN	A	466	40.709	37.145	81.155	1.00 32.26
ATOM	3706	OD1	ASN	A	466	41.384	36.191	80.723	1.00 29.29
ATOM	3707	ND2	ASN	A	466	39.775	37.015	82.111	1.00 28.19
ATOM	3708	N	ALA	A	467	40.306	41.666	79.967	1.00 27.97
ATOM	3709	CA	ALA	A	467	40.587	43.079	80.295	1.00 26.66
ATOM	3710	C	ALA	A	467	39.352	43.827	80.720	1.00 31.78
ATOM	3711	O	ALA	A	467	39.406	44.845	81.393	1.00 31.71
ATOM	3712	CB	ALA	A	467	41.365	43.837	79.256	1.00 25.99
ATOM	3713	N	CYS	A	468	38.217	43.277	80.336	1.00 28.06
ATOM	3714	CA	CYS	A	468	36.942	43.862	80.693	1.00 25.80
ATOM	3715	C	CYS	A	468	36.668	43.619	82.165	1.00 26.47
ATOM	3716	O	CYS	A	468	36.469	44.517	82.963	1.00 27.99
ATOM	3717	CB	CYS	A	468	35.882	43.376	79.696	1.00 24.56
ATOM	3718	SG	CYS	A	468	36.455	43.873	78.049	1.00 27.76
ATOM	3719	N	ILE	A	469	36.752	42.384	82.540	1.00 24.34
ATOM	3720	CA	ILE	A	469	36.599	42.052	83.921	1.00 25.23
ATOM	3721	C	ILE	A	469	37.560	42.800	84.876	1.00 28.13
ATOM	3722	O	ILE	A	469	37.175	43.220	85.950	1.00 29.54
ATOM	3723	CB	ILE	A	469	36.858	40.574	84.068	1.00 27.23
ATOM	3724	CG1	ILE	A	469	35.956	39.801	83.112	1.00 26.94
ATOM	3725	CG2	ILE	A	469	36.537	40.208	85.496	1.00 25.56
ATOM	3726	CD1	ILE	A	469	36.247	38.298	83.085	1.00 45.50
ATOM	3727	N	ALA	A	470	38.830	42.960	84.534	1.00 23.28
ATOM	3728	CA	ALA	A	470	39.749	43.621	85.461	1.00 22.23
ATOM	3729	C	ALA	A	470	39.392	45.038	85.808	1.00 30.29
ATOM	3730	O	ALA	A	470	39.474	45.451	86.986	1.00 32.82
ATOM	3731	CB	ALA	A	470	41.218	43.502	85.074	1.00 21.98
ATOM	3732	N	LEU	A	471	39.007	45.760	84.759	1.00 23.53
ATOM	3733	CA	LEU	A	471	38.643	47.173	84.834	1.00 18.39
ATOM	3734	C	LEU	A	471	37.333	47.373	85.569	1.00 26.57
ATOM	3735	O	LEU	A	471	37.210	48.208	86.462	1.00 30.48
ATOM	3736	CB	LEU	A	471	38.676	47.827	83.444	1.00 15.51
ATOM	3737	CG	LEU	A	471	38.671	49.325	83.539	1.00 24.20
ATOM	3738	CD1	LEU	A	471	39.754	49.795	84.513	1.00 24.86
ATOM	3739	CD2	LEU	A	471	38.876	49.941	82.156	1.00 26.35
ATOM	3740	N	SER	A	472	36.351	46.570	85.222	1.00 25.31
ATOM	3741	CA	SER	A	472	35.080	46.674	85.901	1.00 27.56
ATOM	3742	C	SER	A	472	35.260	46.477	87.396	1.00 33.46
ATOM	3743	O	SER	A	472	34.800	47.292	88.214	1.00 32.85
ATOM	3744	CB	SER	A	472	33.989	45.714	85.393	1.00 32.06
ATOM	3745	OG	SER	A	472	34.492	44.774	84.470	1.00 48.56
ATOM	3746	N	GLN	A	473	35.911	45.350	87.736	1.00 27.52
ATOM	3747	CA	GLN	A	473	36.170	44.971	89.108	1.00 24.10
ATOM	3748	C	GLN	A	473	36.866	46.096	89.836	1.00 25.18
ATOM	3749	O	GLN	A	473	36.534	46.458	90.969	1.00 21.62
ATOM	3750	CB	GLN	A	473	36.994	43.671	89.148	1.00 25.86
ATOM	3751	CG	GLN	A	473	36.128	42.402	89.118	1.00 32.72
ATOM	3752	CD	GLN	A	473	34.970	42.504	90.090	1.00 46.08
ATOM	3753	OE1	GLN	A	473	35.165	42.422	91.308	1.00 40.73
ATOM	3754	NE2	GLN	A	473	33.761	42.692	89.559	1.00 28.28
ATOM	3755	N	ARG	A	474	37.855	46.656	89.161	1.00 24.00
ATOM	3756	CA	ARG	A	474	38.562	47.765	89.779	1.00 24.46
ATOM	3757	C	ARG	A	474	37.609	48.893	90.141	1.00 29.31
ATOM	3758	O	ARG	A	474	37.620	49.447	91.242	1.00 33.13
ATOM	3759	CB	ARG	A	474	39.682	48.290	88.898	1.00 20.19
ATOM	3760	CG	ARG	A	474	40.866	47.352	88.831	1.00 28.48
ATOM	3761	CD	ARG	A	474	41.871	47.869	87.832	1.00 34.41
ATOM	3762	NE	ARG	A	474	42.258	49.245	88.093	1.00 40.09
ATOM	3763	CZ	ARG	A	474	42.927	49.938	87.185	1.00 51.25
ATOM	3764	NH1	ARG	A	474	43.220	49.376	86.019	1.00 24.79
ATOM	3765	NH2	ARG	A	474	43.316	51.199	87.444	1.00 20.43
ATOM	3766	N	TRP	A	475	36.791	49.259	89.178	1.00 25.32

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ATOM   3767  CA  TRP A 475      35.862  50.332  89.400  1.00 26.77
ATOM   3768  C   TRP A 475      34.881  49.962  90.474  1.00 27.52
ATOM   3769  O   TRP A 475      34.749  50.633  91.475  1.00 29.64
ATOM   3770  CB  TRP A 475      35.199  50.804  88.093  1.00 27.95
ATOM   3771  CG  TRP A 475      36.047  51.819  87.361  1.00 32.11
ATOM   3772  CD1 TRP A 475      36.873  51.592  86.298  1.00 35.65
ATOM   3773  CD2 TRP A 475      36.161  53.217  87.648  1.00 31.62
ATOM   3774  NE1 TRP A 475      37.484  52.748  85.904  1.00 34.92
ATOM   3775  CE2 TRP A 475      37.054  53.763  86.707  1.00 36.16
ATOM   3776  CE3 TRP A 475      35.588  54.040  88.606  1.00 32.63
ATOM   3777  CZ2 TRP A 475      37.372  55.112  86.719  1.00 36.24
ATOM   3778  CZ3 TRP A 475      35.897  55.375  88.616  1.00 34.74
ATOM   3779  CH2 TRP A 475      36.777  55.901  87.685  1.00 35.77
ATOM   3780  N   ILE A 476      34.234  48.847  90.279  1.00 26.36
ATOM   3781  CA  ILE A 476      33.268  48.386  91.235  1.00 28.33
ATOM   3782  C   ILE A 476      33.771  48.315  92.681  1.00 34.20
ATOM   3783  O   ILE A 476      33.056  48.595  93.637  1.00 36.89
ATOM   3784  CB  ILE A 476      32.722  47.070  90.761  1.00 32.23
ATOM   3785  CG1 ILE A 476      31.993  47.308  89.443  1.00 30.49
ATOM   3786  CG2 ILE A 476      31.864  46.376  91.851  1.00 34.86
ATOM   3787  CD1 ILE A 476      31.595  46.005  88.756  1.00 33.04
ATOM   3788  N   THR A 477      35.010  47.934  92.860  1.00 27.27
ATOM   3789  CA  THR A 477      35.558  47.846  94.194  1.00 24.15
ATOM   3790  C   THR A 477      36.416  49.052  94.523  1.00 27.30
ATOM   3791  O   THR A 477      37.120  49.065  95.519  1.00 27.36
ATOM   3792  CB  THR A 477      36.402  46.578  94.257  1.00 32.13
ATOM   3793  OG1 THR A 477      37.593  46.848  93.557  1.00 29.48
ATOM   3794  CG2 THR A 477      35.634  45.470  93.530  1.00 16.94
ATOM   3795  N   ALA A 478      36.371  50.097  93.695  1.00 22.33
ATOM   3796  CA  ALA A 478      37.164  51.260  93.988  1.00 20.44
ATOM   3797  C   ALA A 478      36.890  51.843  95.390  1.00 32.94
ATOM   3798  O   ALA A 478      35.786  51.756  95.922  1.00 34.38
ATOM   3799  CB  ALA A 478      36.938  52.343  92.942  1.00 19.26
ATOM   3800  N   LYS A 479      37.931  52.469  95.970  1.00 29.65
ATOM   3801  CA  LYS A 479      37.899  53.168  97.243  1.00 27.30
ATOM   3802  C   LYS A 479      38.575  54.512  97.051  1.00 36.54
ATOM   3803  O   LYS A 479      39.378  54.692  96.118  1.00 34.13
ATOM   3804  CB  LYS A 479      38.457  52.410  98.417  1.00 28.01
ATOM   3805  CG  LYS A 479      37.696  51.116  98.631  1.00 51.38
ATOM   3806  CD  LYS A 479      37.115  50.880 100.021  1.00 67.24
ATOM   3807  CE  LYS A 479      35.804  50.103  99.931  1.00 87.12
ATOM   3808  NZ  LYS A 479      35.711  48.948 100.841  1.00 85.55
ATOM   3809  N   GLU A 480      38.241  55.477  97.900  1.00 36.30
ATOM   3810  CA  GLU A 480      38.843  56.793  97.751  1.00 34.79
ATOM   3811  C   GLU A 480      40.261  56.707  97.220  1.00 34.79
ATOM   3812  O   GLU A 480      40.613  57.332  96.234  1.00 34.10
ATOM   3813  CB  GLU A 480      38.899  57.565  99.078  1.00 36.21
ATOM   3814  CG  GLU A 480      37.709  58.500  99.303  1.00 63.85
ATOM   3815  CD  GLU A 480      37.601  59.511  98.214  1.00100.00
ATOM   3816  OE1 GLU A 480      38.457  59.648  97.357  1.00100.00
ATOM   3817  OE2 GLU A 480      36.491  60.209  98.288  1.00100.00
ATOM   3818  N   ASP A 481      41.080  55.946  97.904  1.00 24.69
ATOM   3819  CA  ASP A 481      42.451  55.860  97.519  1.00 23.87
ATOM   3820  C   ASP A 481      42.771  55.314  96.132  1.00 34.51
ATOM   3821  O   ASP A 481      43.925  55.312  95.721  1.00 39.44
ATOM   3822  CB  ASP A 481      43.262  55.155  98.611  1.00 25.29
ATOM   3823  CG  ASP A 481      43.072  53.668  98.575  1.00 39.58
ATOM   3824  OD1 ASP A 481      42.471  53.029  97.708  1.00 46.00
ATOM   3825  OD2 ASP A 481      43.698  53.107  99.567  1.00 39.59
ATOM   3826  N   ASP A 482      41.788  54.881  95.373  1.00 30.70
ATOM   3827  CA  ASP A 482      42.098  54.379  94.024  1.00 31.73
ATOM   3828  C   ASP A 482      41.725  55.307  92.859  1.00 34.17
ATOM   3829  O   ASP A 482      42.158  55.150  91.717  1.00 35.45
ATOM   3830  CB  ASP A 482      41.399  53.022  93.756  1.00 33.31
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ATOM   3831  CG  ASP A 482      41.686  51.970  94.779  1.00 38.90
ATOM   3832  OD1 ASP A 482      42.810  51.514  94.992  1.00 42.45
ATOM   3833  OD2 ASP A 482      40.606  51.625  95.440  1.00 40.17
ATOM   3834  N   LEU A 483      40.863  56.246  93.146  1.00 29.93
ATOM   3835  CA  LEU A 483      40.352  57.159  92.160  1.00 27.80
ATOM   3836  C   LEU A 483      41.434  57.943  91.410  1.00 40.70
ATOM   3837  O   LEU A 483      41.386  58.102  90.180  1.00 40.76
ATOM   3838  CB  LEU A 483      39.265  58.049  92.819  1.00 22.54
ATOM   3839  CG  LEU A 483      38.148  57.240  93.488  1.00 20.75
ATOM   3840  CD1 LEU A 483      37.170  58.165  94.197  1.00 19.29
ATOM   3841  CD2 LEU A 483      37.389  56.467  92.414  1.00 21.46
ATOM   3842  N   ASN A 484      42.410  58.446  92.162  1.00 36.15
ATOM   3843  CA  ASN A 484      43.459  59.225  91.571  1.00 34.08
ATOM   3844  C   ASN A 484      44.168  58.524  90.429  1.00 39.51
ATOM   3845  O   ASN A 484      44.456  59.091  89.359  1.00 38.59
ATOM   3846  CB  ASN A 484      44.495  59.602  92.618  1.00 34.26
ATOM   3847  CG  ASN A 484      45.807  59.955  91.941  1.00100.00
ATOM   3848  OD1 ASN A 484      45.878  60.940  91.171  1.00100.00
ATOM   3849  ND2 ASN A 484      46.836  59.134  92.186  1.00100.00
ATOM   3850  N   SER A 485      44.472  57.268  90.698  1.00 35.37
ATOM   3851  CA  SER A 485      45.202  56.417  89.791  1.00 32.79
ATOM   3852  C   SER A 485      44.522  56.140  88.484  1.00 32.26
ATOM   3853  O   SER A 485      45.159  55.925  87.463  1.00 32.44
ATOM   3854  CB  SER A 485      45.565  55.132  90.477  1.00 38.65
ATOM   3855  OG  SER A 485      46.040  55.437  91.777  1.00 62.66
ATOM   3856  N   PHE A 486      43.222  56.110  88.491  1.00 27.13
ATOM   3857  CA  PHE A 486      42.631  55.809  87.233  1.00 28.26
ATOM   3858  C   PHE A 486      43.193  56.772  86.264  1.00 32.12
ATOM   3859  O   PHE A 486      43.423  57.910  86.604  1.00 32.02
ATOM   3860  CB  PHE A 486      41.101  55.819  87.198  1.00 31.01
ATOM   3861  CG  PHE A 486      40.471  54.807  88.132  1.00 27.04
ATOM   3862  CD1 PHE A 486      40.504  53.425  87.911  1.00 22.43
ATOM   3863  CD2 PHE A 486      39.805  55.293  89.253  1.00 21.40
ATOM   3864  CE1 PHE A 486      39.896  52.538  88.804  1.00 19.69
ATOM   3865  CE2 PHE A 486      39.224  54.426  90.174  1.00 19.20
ATOM   3866  CZ  PHE A 486      39.245  53.051  89.927  1.00 15.13
ATOM   3867  N   ASN A 487      43.455  56.279  85.089  1.00 34.97
ATOM   3868  CA  ASN A 487      44.032  57.092  84.070  1.00 38.06
ATOM   3869  C   ASN A 487      43.491  56.622  82.758  1.00 43.55
ATOM   3870  O   ASN A 487      42.951  55.537  82.604  1.00 46.30
ATOM   3871  CB  ASN A 487      45.591  57.038  84.085  1.00 43.93
ATOM   3872  CG  ASN A 487      46.196  58.169  83.302  1.00 56.10
ATOM   3873  OD1 ASN A 487      46.057  58.189  82.077  1.00 42.12
ATOM   3874  ND2 ASN A 487      46.829  59.112  84.007  1.00 65.62
ATOM   3875  N   ALA A 488      43.662  57.435  81.781  1.00 39.34
ATOM   3876  CA  ALA A 488      43.201  57.055  80.472  1.00 38.25
ATOM   3877  C   ALA A 488      44.024  55.900  79.809  1.00 43.58
ATOM   3878  O   ALA A 488      43.596  55.317  78.834  1.00 44.11
ATOM   3879  CB  ALA A 488      43.153  58.314  79.621  1.00 37.54
ATOM   3880  N   THR A 489      45.207  55.555  80.314  1.00 38.34
ATOM   3881  CA  THR A 489      45.996  54.499  79.715  1.00 36.16
ATOM   3882  C   THR A 489      45.270  53.181  79.792  1.00 45.74
ATOM   3883  O   THR A 489      45.476  52.233  79.057  1.00 47.78
ATOM   3884  CB  THR A 489      47.296  54.458  80.503  1.00 31.01
ATOM   3885  OG1 THR A 489      46.961  54.457  81.872  1.00 35.33
ATOM   3886  CG2 THR A 489      47.993  55.771  80.229  1.00 28.28
ATOM   3887  N   ASP A 490      44.337  53.182  80.708  1.00 46.75
ATOM   3888  CA  ASP A 490      43.560  52.018  80.972  1.00 51.49
ATOM   3889  C   ASP A 490      42.759  51.515  79.786  1.00 52.21
ATOM   3890  O   ASP A 490      42.396  50.342  79.651  1.00 54.75
ATOM   3891  CB  ASP A 490      42.676  52.345  82.184  1.00 54.04
ATOM   3892  CG  ASP A 490      43.413  52.884  83.380  1.00 53.83
ATOM   3893  OD1 ASP A 490      44.621  52.777  83.616  1.00 62.93
ATOM   3894  OD2 ASP A 490      42.565  53.446  84.165  1.00 35.66
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ATOM   3895  N   LEU A 491      42.486  52.450  78.938  1.00 42.42
ATOM   3896  CA  LEU A 491      41.752  52.250  77.723  1.00 43.54
ATOM   3897  C   LEU A 491      42.712  51.977  76.585  1.00 43.97
ATOM   3898  O   LEU A 491      42.340  51.438  75.588  1.00 42.53
ATOM   3899  CB  LEU A 491      40.984  53.528  77.421  1.00 44.89
ATOM   3900  CG  LEU A 491      39.794  53.747  78.338  1.00 48.31
ATOM   3901  CD1 LEU A 491      38.558  54.171  77.552  1.00 49.16
ATOM   3902  CD2 LEU A 491      39.377  52.494  79.125  1.00 39.24
ATOM   3903  N   LYS A 492      43.958  52.403  76.754  1.00 42.32
ATOM   3904  CA  LYS A 492      44.999  52.320  75.696  1.00 44.57
ATOM   3905  C   LYS A 492      44.826  51.165  74.680  1.00 49.08
ATOM   3906  O   LYS A 492      44.810  51.343  73.473  1.00 49.66
ATOM   3907  CB  LYS A 492      46.359  52.177  76.401  1.00 48.47
ATOM   3908  CG  LYS A 492      47.487  52.883  75.629  1.00 88.73
ATOM   3909  CD  LYS A 492      48.852  52.537  76.197  1.00100.00
ATOM   3910  CE  LYS A 492      48.786  51.460  77.300  1.00100.00
ATOM   3911  NZ  LYS A 492      50.103  50.896  77.541  1.00100.00
ATOM   3912  N   ASP A 493      44.711  49.917  75.227  1.00 41.86
ATOM   3913  CA  ASP A 493      44.664  48.740  74.372  1.00 40.17
ATOM   3914  C   ASP A 493      43.220  48.162  74.215  1.00 44.29
ATOM   3915  O   ASP A 493      43.031  46.973  73.889  1.00 42.00
ATOM   3916  CB  ASP A 493      45.560  47.699  75.015  1.00 41.52
ATOM   3917  CG  ASP A 493      47.021  48.130  74.956  1.00 67.01
ATOM   3918  OD1 ASP A 493      47.467  48.451  73.856  1.00 77.10
ATOM   3919  OD2 ASP A 493      47.678  48.131  75.984  1.00 57.19
ATOM   3920  N   LEU A 494      42.193  49.005  74.475  1.00 40.69
ATOM   3921  CA  LEU A 494      40.789  48.512  74.526  1.00 36.32
ATOM   3922  C   LEU A 494      39.992  48.877  73.245  1.00 37.76
ATOM   3923  O   LEU A 494      39.897  50.029  72.863  1.00 38.93
ATOM   3924  CB  LEU A 494      40.098  49.125  75.733  1.00 32.52
ATOM   3925  CG  LEU A 494      40.376  48.433  77.063  1.00 30.66
ATOM   3926  CD1 LEU A 494      39.229  48.580  78.052  1.00 30.39
ATOM   3927  CD2 LEU A 494      40.611  46.925  76.918  1.00 23.54
ATOM   3928  N   SER A 495      39.477  47.825  72.631  1.00 25.56
ATOM   3929  CA  SER A 495      38.674  48.017  71.457  1.00 22.23
ATOM   3930  C   SER A 495      37.344  48.670  71.856  1.00 31.27
ATOM   3931  O   SER A 495      36.968  48.706  73.038  1.00 31.21
ATOM   3932  CB  SER A 495      38.380  46.705  70.795  1.00 20.88
ATOM   3933  OG  SER A 495      37.192  46.143  71.317  1.00 33.60
ATOM   3934  N   SER A 496      36.627  49.184  70.865  1.00 29.48
ATOM   3935  CA  SER A 496      35.363  49.821  71.139  1.00 26.67
ATOM   3936  C   SER A 496      34.495  48.747  71.744  1.00 29.54
ATOM   3937  O   SER A 496      33.744  48.960  72.697  1.00 24.80
ATOM   3938  CB  SER A 496      34.760  50.441  69.894  1.00 24.67
ATOM   3939  OG  SER A 496      33.749  49.597  69.397  1.00 48.80
ATOM   3940  N   HIS A 497      34.674  47.547  71.219  1.00 26.61
ATOM   3941  CA  HIS A 497      33.949  46.383  71.750  1.00 29.22
ATOM   3942  C   HIS A 497      34.156  46.148  73.275  1.00 37.24
ATOM   3943  O   HIS A 497      33.238  45.863  74.041  1.00 38.21
ATOM   3944  CB  HIS A 497      34.364  45.106  70.978  1.00 30.69
ATOM   3945  CG  HIS A 497      34.182  45.348  69.545  1.00 34.29
ATOM   3946  ND1 HIS A 497      32.943  45.204  68.962  1.00 35.42
ATOM   3947  CD2 HIS A 497      35.054  45.833  68.622  1.00 36.68
ATOM   3948  CE1 HIS A 497      33.075  45.531  67.702  1.00 35.05
ATOM   3949  NE2 HIS A 497      34.330  45.932  67.462  1.00 35.88
ATOM   3950  N   GLN A 498      35.406  46.243  73.715  1.00 33.56
ATOM   3951  CA  GLN A 498      35.737  46.008  75.094  1.00 29.69
ATOM   3952  C   GLN A 498      35.263  47.122  75.965  1.00 27.11
ATOM   3953  O   GLN A 498      34.842  46.930  77.089  1.00 23.92
ATOM   3954  CB  GLN A 498      37.221  45.659  75.248  1.00 29.95
ATOM   3955  CG  GLN A 498      37.582  44.317  74.544  1.00 25.78
ATOM   3956  CD  GLN A 498      39.074  44.084  74.535  1.00 28.64
ATOM   3957  OE1 GLN A 498      39.796  44.891  73.960  1.00 26.62
ATOM   3958  NE2 GLN A 498      39.561  43.049  75.218  1.00 20.96
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ATOM   3959  N   LEU A 499      35.289  48.301  75.431  1.00 27.13
ATOM   3960  CA  LEU A 499      34.819  49.396  76.229  1.00 29.32
ATOM   3961  C   LEU A 499      33.351  49.162  76.632  1.00 28.39
ATOM   3962  O   LEU A 499      32.893  49.361  77.780  1.00 29.41
ATOM   3963  CB  LEU A 499      34.991  50.709  75.436  1.00 31.70
ATOM   3964  CG  LEU A 499      36.242  51.512  75.788  1.00 39.76
ATOM   3965  CD1 LEU A 499      37.335  50.572  76.278  1.00 42.91
ATOM   3966  CD2 LEU A 499      36.718  52.268  74.555  1.00 39.08
ATOM   3967  N   ASN A 500      32.606  48.737  75.642  1.00 15.23
ATOM   3968  CA  ASN A 500      31.213  48.508  75.828  1.00 13.44
ATOM   3969  C   ASN A 500      30.919  47.455  76.864  1.00 18.98
ATOM   3970  O   ASN A 500      29.997  47.602  77.705  1.00 19.01
ATOM   3971  CB  ASN A 500      30.604  48.129  74.476  1.00 12.21
ATOM   3972  CG  ASN A 500      29.093  48.214  74.426  1.00 37.49
ATOM   3973  OD1 ASN A 500      28.433  49.151  74.930  1.00 36.17
ATOM   3974  ND2 ASN A 500      28.542  47.218  73.787  1.00 18.34
ATOM   3975  N   GLU A 501      31.699  46.366  76.743  1.00 14.20
ATOM   3976  CA  GLU A 501      31.626  45.224  77.625  1.00 13.27
ATOM   3977  C   GLU A 501      31.948  45.676  79.063  1.00 21.59
ATOM   3978  O   GLU A 501      31.175  45.463  80.009  1.00 25.02
ATOM   3979  CB  GLU A 501      32.446  44.057  77.053  1.00 14.95
ATOM   3980  CG  GLU A 501      32.371  42.827  77.989  1.00 30.40
ATOM   3981  CD  GLU A 501      30.946  42.399  78.199  1.00 39.28
ATOM   3982  OE1 GLU A 501      30.050  42.672  77.413  1.00 76.70
ATOM   3983  OE2 GLU A 501      30.780  41.694  79.292  1.00 46.10
ATOM   3984  N   PHE A 502      33.059  46.400  79.226  1.00 18.07
ATOM   3985  CA  PHE A 502      33.395  46.952  80.530  1.00 21.54
ATOM   3986  C   PHE A 502      32.179  47.679  81.125  1.00 23.38
ATOM   3987  O   PHE A 502      31.786  47.491  82.301  1.00 21.47
ATOM   3988  CB  PHE A 502      34.507  48.012  80.327  1.00 26.05
ATOM   3989  CG  PHE A 502      34.590  49.082  81.393  1.00 30.41
ATOM   3990  CD1 PHE A 502      35.085  48.781  82.662  1.00 29.68
ATOM   3991  CD2 PHE A 502      34.211  50.402  81.132  1.00 39.16
ATOM   3992  CE1 PHE A 502      35.183  49.773  83.638  1.00 31.12
ATOM   3993  CE2 PHE A 502      34.305  51.414  82.096  1.00 40.46
ATOM   3994  CZ  PHE A 502      34.812  51.090  83.352  1.00 35.41
ATOM   3995  N   LEU A 503      31.613  48.557  80.288  1.00 18.39
ATOM   3996  CA  LEU A 503      30.487  49.343  80.692  1.00 22.78
ATOM   3997  C   LEU A 503      29.337  48.491  81.178  1.00 31.04
ATOM   3998  O   LEU A 503      28.768  48.784  82.243  1.00 29.23
ATOM   3999  CB  LEU A 503      30.002  50.325  79.619  1.00 24.68
ATOM   4000  CG  LEU A 503      30.888  51.571  79.465  1.00 27.47
ATOM   4001  CD1 LEU A 503      30.415  52.376  78.259  1.00 24.86
ATOM   4002  CD2 LEU A 503      30.860  52.420  80.733  1.00 20.54
ATOM   4003  N   ALA A 504      29.012  47.444  80.378  1.00 27.79
ATOM   4004  CA  ALA A 504      27.911  46.474  80.643  1.00 24.63
ATOM   4005  C   ALA A 504      28.140  45.752  81.939  1.00 27.71
ATOM   4006  O   ALA A 504      27.265  45.577  82.817  1.00 28.62
ATOM   4007  CB  ALA A 504      27.762  45.482  79.496  1.00 23.87
ATOM   4008  N   GLN A 505      29.382  45.344  82.066  1.00 22.16
ATOM   4009  CA  GLN A 505      29.738  44.710  83.299  1.00 21.02
ATOM   4010  C   GLN A 505      29.489  45.737  84.423  1.00 31.26
ATOM   4011  O   GLN A 505      28.787  45.507  85.413  1.00 32.31
ATOM   4012  CB  GLN A 505      31.202  44.209  83.270  1.00 18.95
ATOM   4013  CG  GLN A 505      31.367  42.881  82.495  1.00 13.72
ATOM   4014  CD  GLN A 505      32.806  42.549  82.136  1.00 31.75
ATOM   4015  OE1 GLN A 505      33.796  42.969  82.768  1.00 43.14
ATOM   4016  NE2 GLN A 505      32.923  41.781  81.085  1.00 39.34
ATOM   4017  N   THR A 506      30.056  46.918  84.263  1.00 25.95
ATOM   4018  CA  THR A 506      29.855  47.864  85.302  1.00 23.64
ATOM   4019  C   THR A 506      28.411  48.101  85.579  1.00 23.89
ATOM   4020  O   THR A 506      27.923  47.999  86.696  1.00 22.75
ATOM   4021  CB  THR A 506      30.600  49.130  85.008  1.00 23.72
ATOM   4022  OG1 THR A 506      31.938  48.749  84.742  1.00 27.18
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ATOM   4023  CG2 THR A 506      30.502  49.961  86.260  1.00 11.12
ATOM   4024  N   LEU A 507      27.727  48.408  84.518  1.00 17.92
ATOM   4025  CA  LEU A 507      26.334  48.683  84.604  1.00 17.22
ATOM   4026  C   LEU A 507      25.618  47.683  85.442  1.00 25.65
ATOM   4027  O   LEU A 507      24.816  48.073  86.266  1.00 27.85
ATOM   4028  CB  LEU A 507      25.693  48.686  83.224  1.00 17.85
ATOM   4029  CG  LEU A 507      24.207  48.930  83.336  1.00 21.02
ATOM   4030  CD1 LEU A 507      23.974  50.290  83.970  1.00 22.48
ATOM   4031  CD2 LEU A 507      23.599  48.919  81.949  1.00 15.25
ATOM   4032  N   GLN A 508      25.878  46.395  85.194  1.00 21.35
ATOM   4033  CA  GLN A 508      25.215  45.333  85.979  1.00 18.08
ATOM   4034  C   GLN A 508      25.386  45.561  87.508  1.00 34.24
ATOM   4035  O   GLN A 508      24.653  45.017  88.343  1.00 34.04
ATOM   4036  CB  GLN A 508      25.713  43.917  85.608  1.00 10.94
ATOM   4037  CG  GLN A 508      25.366  43.446  84.191  1.00 26.42
ATOM   4038  CD  GLN A 508      25.635  41.944  84.002  1.00 52.93
ATOM   4039  OE1 GLN A 508      26.550  41.396  84.628  1.00 32.89
ATOM   4040  NE2 GLN A 508      24.864  41.252  83.147  1.00 34.36
ATOM   4041  N   ARG A 509      26.380  46.361  87.901  1.00 33.73
ATOM   4042  CA  ARG A 509      26.600  46.614  89.328  1.00 32.53
ATOM   4043  C   ARG A 509      26.153  48.016  89.727  1.00 33.63
ATOM   4044  O   ARG A 509      26.509  48.522  90.777  1.00 31.08
ATOM   4045  CB  ARG A 509      28.055  46.440  89.760  1.00 29.22
ATOM   4046  CG  ARG A 509      28.553  45.014  89.733  1.00 29.78
ATOM   4047  CD  ARG A 509      27.744  44.054  90.609  1.00 30.86
ATOM   4048  NE  ARG A 509      28.533  43.602  91.756  1.00 82.23
ATOM   4049  CZ  ARG A 509      29.842  43.274  91.726  1.00100.00
ATOM   4050  NH1 ARG A 509      30.579  43.315  90.613  1.00 92.85
ATOM   4051  NH2 ARG A 509      30.430  42.881  92.855  1.00 91.85
ATOM   4052  N   ALA A 510      25.384  48.659  88.880  1.00 32.59
ATOM   4053  CA  ALA A 510      24.952  49.985  89.215  1.00 32.51
ATOM   4054  C   ALA A 510      24.151  49.845  90.479  1.00 34.97
ATOM   4055  O   ALA A 510      23.601  48.785  90.693  1.00 37.57
ATOM   4056  CB  ALA A 510      24.189  50.622  88.063  1.00 32.91
ATOM   4057  N   PRO A 511      24.174  50.856  91.334  1.00 25.14
ATOM   4058  CA  PRO A 511      24.867  52.102  91.052  1.00 21.00
ATOM   4059  C   PRO A 511      26.217  52.178  91.694  1.00 29.23
ATOM   4060  O   PRO A 511      26.445  51.601  92.723  1.00 28.16
ATOM   4061  CB  PRO A 511      24.102  53.169  91.818  1.00 21.55
ATOM   4062  CG  PRO A 511      23.316  52.432  92.886  1.00 28.68
ATOM   4063  CD  PRO A 511      23.169  50.995  92.407  1.00 25.16
ATOM   4064  N   LEU A 512      27.094  52.968  91.109  1.00 32.95
ATOM   4065  CA  LEU A 512      28.394  53.188  91.686  1.00 33.42
ATOM   4066  C   LEU A 512      28.287  54.512  92.397  1.00 38.65
ATOM   4067  O   LEU A 512      27.388  55.305  92.114  1.00 40.69
ATOM   4068  CB  LEU A 512      29.453  53.350  90.587  1.00 34.40
ATOM   4069  CG  LEU A 512      30.178  52.049  90.216  1.00 40.13
ATOM   4070  CD1 LEU A 512      29.222  51.086  89.508  1.00 39.04
ATOM   4071  CD2 LEU A 512      31.322  52.385  89.273  1.00 44.61
ATOM   4072  N   PRO A 513      29.196  54.781  93.312  1.00 31.05
ATOM   4073  CA  PRO A 513      29.167  56.058  94.008  1.00 27.16
ATOM   4074  C   PRO A 513      29.296  57.203  93.019  1.00 23.76
ATOM   4075  O   PRO A 513      30.121  57.182  92.118  1.00 27.17
ATOM   4076  CB  PRO A 513      30.387  56.013  94.948  1.00 25.59
ATOM   4077  CG  PRO A 513      30.702  54.542  95.149  1.00 27.14
ATOM   4078  CD  PRO A 513      30.030  53.779  94.032  1.00 25.00
ATOM   4079  N   LEU A 514      28.478  58.203  93.185  1.00 22.92
ATOM   4080  CA  LEU A 514      28.516  59.350  92.279  1.00 27.55
ATOM   4081  C   LEU A 514      29.930  59.766  91.940  1.00 31.95
ATOM   4082  O   LEU A 514      30.287  59.908  90.765  1.00 37.11
ATOM   4083  CB  LEU A 514      27.673  60.564  92.741  1.00 30.03
ATOM   4084  CG  LEU A 514      27.428  61.626  91.648  1.00 32.87
ATOM   4085  CD1 LEU A 514      26.648  61.082  90.440  1.00 28.48
ATOM   4086  CD2 LEU A 514      26.699  62.780  92.272  1.00 31.16
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ATOM	4087	N	GLY	A	515	30.731	59.989	92.979	1.00 24.42
ATOM	4088	CA	GLY	A	515	32.131	60.384	92.811	1.00 25.59
ATOM	4089	C	GLY	A	515	32.902	59.472	91.835	1.00 33.83
ATOM	4090	O	GLY	A	515	33.746	59.914	91.035	1.00 35.67
ATOM	4091	N	HIS	A	516	32.602	58.180	91.891	1.00 26.40
ATOM	4092	CA	HIS	A	516	33.257	57.255	90.998	1.00 25.86
ATOM	4093	C	HIS	A	516	32.911	57.578	89.560	1.00 27.62
ATOM	4094	O	HIS	A	516	33.786	57.596	88.695	1.00 28.67
ATOM	4095	CB	HIS	A	516	32.826	55.814	91.282	1.00 25.39
ATOM	4096	CG	HIS	A	516	33.452	55.283	92.505	1.00 27.96
ATOM	4097	ND1	HIS	A	516	33.635	56.092	93.602	1.00 30.14
ATOM	4098	CD2	HIS	A	516	33.929	54.037	92.791	1.00 27.79
ATOM	4099	CE1	HIS	A	516	34.205	55.336	94.534	1.00 27.58
ATOM	4100	NE2	HIS	A	516	34.390	54.099	94.085	1.00 27.02
ATOM	4101	N	ILE	A	517	31.617	57.815	89.315	1.00 21.40
ATOM	4102	CA	ILE	A	517	31.137	58.107	87.973	1.00 22.75
ATOM	4103	C	ILE	A	517	31.706	59.424	87.462	1.00 31.09
ATOM	4104	O	ILE	A	517	32.246	59.558	86.352	1.00 28.78
ATOM	4105	CB	ILE	A	517	29.601	58.024	87.930	1.00 27.12
ATOM	4106	CG1	ILE	A	517	29.225	56.610	88.312	1.00 29.40
ATOM	4107	CG2	ILE	A	517	29.013	58.285	86.536	1.00 25.49
ATOM	4108	CD1	ILE	A	517	29.305	55.665	87.105	1.00 34.77
ATOM	4109	N	LYS	A	518	31.589	60.416	88.308	1.00 27.28
ATOM	4110	CA	LYS	A	518	32.108	61.690	87.955	1.00 23.77
ATOM	4111	C	LYS	A	518	33.558	61.482	87.485	1.00 24.03
ATOM	4112	O	LYS	A	518	33.982	61.831	86.391	1.00 26.08
ATOM	4113	CB	LYS	A	518	32.038	62.557	89.210	1.00 24.00
ATOM	4114	CG	LYS	A	518	30.641	63.060	89.591	1.00 19.24
ATOM	4115	CD	LYS	A	518	30.721	64.276	90.537	1.00 27.93
ATOM	4116	CE	LYS	A	518	29.379	64.877	90.962	1.00 37.11
ATOM	4117	NZ	LYS	A	518	28.924	65.988	90.104	1.00 52.30
ATOM	4118	N	ARG	A	519	34.322	60.899	88.361	1.00 17.90
ATOM	4119	CA	ARG	A	519	35.703	60.636	88.098	1.00 20.80
ATOM	4120	C	ARG	A	519	35.862	59.874	86.802	1.00 28.98
ATOM	4121	O	ARG	A	519	36.812	60.084	86.051	1.00 29.86
ATOM	4122	CB	ARG	A	519	36.313	59.844	89.276	1.00 20.56
ATOM	4123	CG	ARG	A	519	37.721	59.308	89.036	1.00 29.02
ATOM	4124	CD	ARG	A	519	38.668	60.320	88.404	1.00 41.17
ATOM	4125	NE	ARG	A	519	40.086	60.008	88.616	1.00 59.84
ATOM	4126	CZ	ARG	A	519	41.076	60.858	88.349	1.00 50.77
ATOM	4127	NH1	ARG	A	519	40.838	62.073	87.880	1.00 31.21
ATOM	4128	NH2	ARG	A	519	42.329	60.486	88.543	1.00 31.86
ATOM	4129	N	MET	A	520	34.937	58.956	86.565	1.00 25.08
ATOM	4130	CA	MET	A	520	34.979	58.121	85.379	1.00 24.56
ATOM	4131	C	MET	A	520	34.906	58.918	84.086	1.00 29.37
ATOM	4132	O	MET	A	520	35.651	58.687	83.114	1.00 27.92
ATOM	4133	CB	MET	A	520	33.905	57.007	85.442	1.00 26.98
ATOM	4134	CG	MET	A	520	34.082	55.902	84.399	1.00 28.02
ATOM	4135	SD	MET	A	520	32.830	54.591	84.479	1.00 27.87
ATOM	4136	CE	MET	A	520	33.246	53.825	86.070	1.00 22.09
ATOM	4137	N	GLN	A	521	33.982	59.864	84.067	1.00 28.32
ATOM	4138	CA	GLN	A	521	33.838	60.672	82.886	1.00 28.34
ATOM	4139	C	GLN	A	521	35.067	61.540	82.785	1.00 36.52
ATOM	4140	O	GLN	A	521	35.514	61.879	81.707	1.00 35.87
ATOM	4141	CB	GLN	A	521	32.514	61.451	82.863	1.00 28.34
ATOM	4142	CG	GLN	A	521	32.564	62.774	82.079	1.00 9.68
ATOM	4143	CD	GLN	A	521	32.890	62.572	80.616	1.00 27.55
ATOM	4144	OE1	GLN	A	521	33.382	63.491	79.924	1.00 28.25
ATOM	4145	NE2	GLN	A	521	32.657	61.368	80.142	1.00 25.70
ATOM	4146	N	GLU	A	522	35.626	61.827	83.963	1.00 36.19
ATOM	4147	CA	GLU	A	522	36.818	62.648	84.171	1.00 36.13
ATOM	4148	C	GLU	A	522	38.136	62.046	83.662	1.00 42.48
ATOM	4149	O	GLU	A	522	39.099	62.735	83.335	1.00 42.40
ATOM	4150	CB	GLU	A	522	36.857	63.035	85.641	1.00 37.79

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ATOM   4151  CG  GLU A 522      38.233  63.196  86.273  1.00 58.85
ATOM   4152  CD  GLU A 522      38.046  64.040  87.493  1.00 73.64
ATOM   4153  OE1 GLU A 522      37.006  64.641  87.709  1.00 45.66
ATOM   4154  OE2 GLU A 522      39.081  64.037  88.289  1.00 47.91
ATOM   4155  N   VAL A 523      38.188  60.739  83.552  1.00 40.13
ATOM   4156  CA  VAL A 523      39.401  60.136  83.058  1.00 37.49
ATOM   4157  C   VAL A 523      39.205  59.351  81.778  1.00 38.88
ATOM   4158  O   VAL A 523      40.195  59.016  81.138  1.00 40.21
ATOM   4159  CB  VAL A 523      40.184  59.370  84.102  1.00 40.01
ATOM   4160  CG1 VAL A 523      40.231  60.165  85.413  1.00 39.12
ATOM   4161  CG2 VAL A 523      39.534  58.017  84.320  1.00 39.82
ATOM   4162  N   TYR A 524      37.952  59.048  81.379  1.00 30.35
ATOM   4163  CA  TYR A 524      37.801  58.330  80.114  1.00 28.11
ATOM   4164  C   TYR A 524      37.061  59.144  79.074  1.00 33.14
ATOM   4165  O   TYR A 524      37.076  58.802  77.908  1.00 35.84
ATOM   4166  CB  TYR A 524      37.281  56.878  80.119  1.00 25.56
ATOM   4167  CG  TYR A 524      37.941  55.960  81.111  1.00 20.87
ATOM   4168  CD1 TYR A 524      39.324  55.938  81.258  1.00 21.59
ATOM   4169  CD2 TYR A 524      37.170  55.083  81.879  1.00 19.80
ATOM   4170  CE1 TYR A 524      39.905  55.063  82.176  1.00 25.64
ATOM   4171  CE2 TYR A 524      37.731  54.227  82.827  1.00 18.61
ATOM   4172  CZ  TYR A 524      39.116  54.231  82.969  1.00 19.81
ATOM   4173  OH  TYR A 524      39.706  53.402  83.863  1.00 23.92
ATOM   4174  N   ASN A 525      36.416  60.221  79.496  1.00 25.98
ATOM   4175  CA  ASN A 525      35.687  61.088  78.588  1.00 25.01
ATOM   4176  C   ASN A 525      34.661  60.354  77.735  1.00 29.86
ATOM   4177  O   ASN A 525      34.533  60.535  76.499  1.00 29.39
ATOM   4178  CB  ASN A 525      36.637  61.922  77.739  1.00 29.55
ATOM   4179  CG  ASN A 525      35.949  62.980  76.894  1.00 30.32
ATOM   4180  OD1 ASN A 525      36.460  63.332  75.850  1.00 32.77
ATOM   4181  ND2 ASN A 525      34.822  63.527  77.344  1.00 13.80
ATOM   4182  N   PHE A 526      33.924  59.512  78.436  1.00 24.21
ATOM   4183  CA  PHE A 526      32.900  58.745  77.807  1.00 25.14
ATOM   4184  C   PHE A 526      31.846  59.631  77.214  1.00 31.74
ATOM   4185  O   PHE A 526      31.161  59.241  76.272  1.00 34.99
ATOM   4186  CB  PHE A 526      32.256  57.732  78.781  1.00 26.60
ATOM   4187  CG  PHE A 526      33.115  56.499  78.978  1.00 23.82
ATOM   4188  CD1 PHE A 526      34.017  56.080  78.000  1.00 25.00
ATOM   4189  CD2 PHE A 526      33.031  55.767  80.159  1.00 21.74
ATOM   4190  CE1 PHE A 526      34.783  54.927  78.173  1.00 27.63
ATOM   4191  CE2 PHE A 526      33.817  54.634  80.370  1.00 25.42
ATOM   4192  CZ  PHE A 526      34.683  54.202  79.364  1.00 25.28
ATOM   4193  N   ASN A 527      31.689  60.815  77.760  1.00 28.22
ATOM   4194  CA  ASN A 527      30.657  61.688  77.214  1.00 31.18
ATOM   4195  C   ASN A 527      30.884  62.046  75.744  1.00 33.17
ATOM   4196  O   ASN A 527      29.965  62.394  74.999  1.00 30.80
ATOM   4197  CB  ASN A 527      30.479  62.967  78.052  1.00 36.41
ATOM   4198  CG  ASN A 527      29.638  62.752  79.292  1.00 46.99
ATOM   4199  OD1 ASN A 527      29.647  63.571  80.209  1.00 36.82
ATOM   4200  ND2 ASN A 527      28.922  61.636  79.338  1.00 43.55
ATOM   4201  N   ALA A 528      32.136  61.947  75.348  1.00 27.46
ATOM   4202  CA  ALA A 528      32.581  62.278  74.005  1.00 26.48
ATOM   4203  C   ALA A 528      32.335  61.188  72.950  1.00 32.09
ATOM   4204  O   ALA A 528      32.420  61.404  71.753  1.00 32.09
ATOM   4205  CB  ALA A 528      34.076  62.584  74.105  1.00 26.04
ATOM   4206  N   ILE A 529      32.067  59.983  73.402  1.00 31.35
ATOM   4207  CA  ILE A 529      31.854  58.859  72.529  1.00 28.47
ATOM   4208  C   ILE A 529      30.492  58.904  71.887  1.00 35.96
ATOM   4209  O   ILE A 529      29.486  59.023  72.578  1.00 38.79
ATOM   4210  CB  ILE A 529      32.103  57.544  73.264  1.00 30.17
ATOM   4211  CG1 ILE A 529      33.622  57.291  73.392  1.00 31.37
ATOM   4212  CG2 ILE A 529      31.428  56.411  72.489  1.00 27.63
ATOM   4213  CD1 ILE A 529      34.059  56.515  74.635  1.00 33.41
ATOM   4214  N   ASN A 530      30.462  58.806  70.559  1.00 34.86
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ATOM	4215	CA	ASN	A	530	29.196	58.841	69.852	1.00 36.44
ATOM	4216	C	ASN	A	530	28.596	57.495	69.473	1.00 39.90
ATOM	4217	O	ASN	A	530	27.452	57.437	69.043	1.00 41.37
ATOM	4218	CB	ASN	A	530	28.951	60.044	68.928	1.00 51.44
ATOM	4219	CG	ASN	A	530	28.461	61.253	69.732	1.00100.00
ATOM	4220	OD1	ASN	A	530	27.652	61.109	70.665	1.00100.00
ATOM	4221	ND2	ASN	A	530	28.955	62.442	69.392	1.00 91.39
ATOM	4222	N	ASN	A	531	29.368	56.403	69.688	1.00 30.37
ATOM	4223	CA	ASN	A	531	28.912	55.030	69.446	1.00 28.14
ATOM	4224	C	ASN	A	531	27.696	54.753	70.360	1.00 32.80
ATOM	4225	O	ASN	A	531	27.746	54.887	71.611	1.00 36.74
ATOM	4226	CB	ASN	A	531	30.092	54.066	69.690	1.00 24.31
ATOM	4227	CG	ASN	A	531	29.770	52.601	69.730	1.00 34.44
ATOM	4228	OD1	ASN	A	531	28.795	52.182	70.359	1.00 36.49
ATOM	4229	ND2	ASN	A	531	30.643	51.810	69.099	1.00 30.57
ATOM	4230	N	SER	A	532	26.570	54.403	69.734	1.00 22.02
ATOM	4231	CA	SER	A	532	25.325	54.183	70.459	1.00 19.67
ATOM	4232	C	SER	A	532	25.323	53.208	71.627	1.00 26.15
ATOM	4233	O	SER	A	532	24.767	53.475	72.680	1.00 26.64
ATOM	4234	CB	SER	A	532	24.090	54.034	69.582	1.00 26.92
ATOM	4235	OG	SER	A	532	24.294	53.211	68.452	1.00 23.59
ATOM	4236	N	GLU	A	533	25.929	52.062	71.423	1.00 22.68
ATOM	4237	CA	GLU	A	533	25.995	51.036	72.420	1.00 22.97
ATOM	4238	C	GLU	A	533	26.677	51.569	73.635	1.00 30.48
ATOM	4239	O	GLU	A	533	26.125	51.539	74.749	1.00 31.13
ATOM	4240	CB	GLU	A	533	26.683	49.779	71.850	1.00 23.96
ATOM	4241	CG	GLU	A	533	25.827	49.146	70.733	1.00 20.82
ATOM	4242	CD	GLU	A	533	24.611	48.450	71.276	1.00 40.65
ATOM	4243	OE1	GLU	A	533	24.432	48.256	72.476	1.00 36.25
ATOM	4244	OE2	GLU	A	533	23.782	48.038	70.339	1.00 25.87
ATOM	4245	N	ILE	A	534	27.872	52.101	73.392	1.00 26.20
ATOM	4246	CA	ILE	A	534	28.622	52.672	74.484	1.00 26.32
ATOM	4247	C	ILE	A	534	27.900	53.849	75.121	1.00 27.83
ATOM	4248	O	ILE	A	534	27.697	53.911	76.326	1.00 26.54
ATOM	4249	CB	ILE	A	534	30.051	53.022	74.102	1.00 29.16
ATOM	4250	CG1	ILE	A	534	30.738	51.808	73.479	1.00 29.47
ATOM	4251	CG2	ILE	A	534	30.801	53.458	75.353	1.00 28.28
ATOM	4252	CD1	ILE	A	534	32.038	52.184	72.765	1.00 34.99
ATOM	4253	N	ARG	A	535	27.480	54.805	74.320	1.00 24.30
ATOM	4254	CA	ARG	A	535	26.804	55.898	74.949	1.00 22.51
ATOM	4255	C	ARG	A	535	25.573	55.401	75.701	1.00 28.19
ATOM	4256	O	ARG	A	535	25.212	55.808	76.791	1.00 32.61
ATOM	4257	CB	ARG	A	535	26.457	56.942	73.913	1.00 24.83
ATOM	4258	CG	ARG	A	535	25.970	58.229	74.541	1.00 21.49
ATOM	4259	CD	ARG	A	535	25.327	59.183	73.554	1.00 13.79
ATOM	4260	NE	ARG	A	535	25.194	60.457	74.213	1.00 31.38
ATOM	4261	CZ	ARG	A	535	26.256	61.140	74.554	1.00 29.41
ATOM	4262	NH1	ARG	A	535	27.463	60.677	74.259	1.00 26.45
ATOM	4263	NH2	ARG	A	535	26.110	62.302	75.195	1.00 19.99
ATOM	4264	N	PHE	A	536	24.911	54.466	75.126	1.00 23.44
ATOM	4265	CA	PHE	A	536	23.740	53.980	75.770	1.00 22.05
ATOM	4266	C	PHE	A	536	23.976	53.555	77.199	1.00 22.74
ATOM	4267	O	PHE	A	536	23.349	54.113	78.105	1.00 22.06
ATOM	4268	CB	PHE	A	536	23.117	52.865	74.919	1.00 23.17
ATOM	4269	CG	PHE	A	536	22.040	52.153	75.658	1.00 21.92
ATOM	4270	CD1	PHE	A	536	20.933	52.845	76.150	1.00 22.66
ATOM	4271	CD2	PHE	A	536	22.145	50.783	75.882	1.00 23.25
ATOM	4272	CE1	PHE	A	536	19.926	52.181	76.847	1.00 21.23
ATOM	4273	CE2	PHE	A	536	21.147	50.101	76.576	1.00 24.70
ATOM	4274	CZ	PHE	A	536	20.047	50.811	77.065	1.00 20.57
ATOM	4275	N	ARG	A	537	24.863	52.560	77.364	1.00 18.22
ATOM	4276	CA	ARG	A	537	25.239	51.995	78.665	1.00 19.20
ATOM	4277	C	ARG	A	537	25.932	52.963	79.618	1.00 27.62
ATOM	4278	O	ARG	A	537	25.803	52.845	80.837	1.00 26.73

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ATOM   4279  CB  ARG A 537      26.035  50.709  78.556  1.00 18.91
ATOM   4280  CG  ARG A 537      25.318  49.656  77.708  1.00 16.55
ATOM   4281  CD  ARG A 537      26.181  48.426  77.387  1.00 21.58
ATOM   4282  NE  ARG A 537      25.341  47.357  76.886  1.00 28.42
ATOM   4283  CZ  ARG A 537      25.060  47.206  75.609  1.00 18.29
ATOM   4284  NH1 ARG A 537      25.569  48.004  74.703  1.00 22.46
ATOM   4285  NH2 ARG A 537      24.240  46.236  75.224  1.00 25.22
ATOM   4286  N   TRP A 538      26.668  53.930  79.064  1.00 24.21
ATOM   4287  CA  TRP A 538      27.337  54.918  79.867  1.00 22.11
ATOM   4288  C   TRP A 538      26.274  55.719  80.550  1.00 28.09
ATOM   4289  O   TRP A 538      26.320  55.951  81.741  1.00 27.39
ATOM   4290  CB  TRP A 538      28.064  55.888  78.949  1.00 20.48
ATOM   4291  CG  TRP A 538      28.606  57.157  79.580  1.00 21.29
ATOM   4292  CD1 TRP A 538      28.641  58.345  78.968  1.00 22.86
ATOM   4293  CD2 TRP A 538      29.286  57.352  80.845  1.00 21.79
ATOM   4294  NE1 TRP A 538      29.228  59.270  79.769  1.00 22.70
ATOM   4295  CE2 TRP A 538      29.643  58.696  80.911  1.00 24.79
ATOM   4296  CE3 TRP A 538      29.574  56.535  81.946  1.00 23.35
ATOM   4297  CZ2 TRP A 538      30.280  59.248  82.025  1.00 25.89
ATOM   4298  CZ3 TRP A 538      30.203  57.056  83.046  1.00 23.35
ATOM   4299  CH2 TRP A 538      30.562  58.405  83.081  1.00 24.89
ATOM   4300  N   LEU A 539      25.303  56.161  79.758  1.00 27.31
ATOM   4301  CA  LEU A 539      24.229  56.974  80.306  1.00 27.18
ATOM   4302  C   LEU A 539      23.369  56.245  81.332  1.00 28.25
ATOM   4303  O   LEU A 539      22.857  56.822  82.266  1.00 27.19
ATOM   4304  CB  LEU A 539      23.428  57.812  79.262  1.00 26.37
ATOM   4305  CG  LEU A 539      24.269  58.682  78.279  1.00 25.71
ATOM   4306  CD1 LEU A 539      23.369  59.424  77.290  1.00 21.79
ATOM   4307  CD2 LEU A 539      25.146  59.680  79.011  1.00 23.51
ATOM   4308  N   ARG A 540      23.199  54.960  81.188  1.00 27.56
ATOM   4309  CA  ARG A 540      22.390  54.283  82.170  1.00 26.88
ATOM   4310  C   ARG A 540      23.145  54.229  83.453  1.00 31.82
ATOM   4311  O   ARG A 540      22.618  54.448  84.539  1.00 32.72
ATOM   4312  CB  ARG A 540      22.034  52.888  81.732  1.00 24.48
ATOM   4313  CG  ARG A 540      21.447  52.885  80.331  1.00 32.96
ATOM   4314  CD  ARG A 540      20.695  51.597  80.090  1.00 33.19
ATOM   4315  NE  ARG A 540      19.660  51.414  81.085  1.00 33.95
ATOM   4316  CZ  ARG A 540      19.151  50.242  81.409  1.00 30.83
ATOM   4317  NH1 ARG A 540      19.564  49.132  80.849  1.00 25.37
ATOM   4318  NH2 ARG A 540      18.186  50.186  82.317  1.00 30.30
ATOM   4319  N   LEU A 541      24.414  53.948  83.318  1.00 28.93
ATOM   4320  CA  LEU A 541      25.239  53.895  84.505  1.00 26.36
ATOM   4321  C   LEU A 541      25.036  55.210  85.277  1.00 31.00
ATOM   4322  O   LEU A 541      24.632  55.246  86.439  1.00 31.62
ATOM   4323  CB  LEU A 541      26.702  53.586  84.094  1.00 23.61
ATOM   4324  CG  LEU A 541      27.730  53.533  85.212  1.00 24.67
ATOM   4325  CD1 LEU A 541      27.387  52.411  86.190  1.00 25.02
ATOM   4326  CD2 LEU A 541      29.098  53.245  84.621  1.00 19.31
ATOM   4327  N   CYS A 542      25.254  56.307  84.570  1.00 30.52
ATOM   4328  CA  CYS A 542      25.115  57.661  85.105  1.00 31.76
ATOM   4329  C   CYS A 542      23.808  57.996  85.805  1.00 32.71
ATOM   4330  O   CYS A 542      23.801  58.536  86.914  1.00 33.97
ATOM   4331  CB  CYS A 542      25.461  58.744  84.073  1.00 31.30
ATOM   4332  SG  CYS A 542      27.085  58.488  83.347  1.00 34.39
ATOM   4333  N   ILE A 543      22.711  57.708  85.125  1.00 25.61
ATOM   4334  CA  ILE A 543      21.382  57.982  85.643  1.00 23.12
ATOM   4335  C   ILE A 543      21.199  57.161  86.885  1.00 30.15
ATOM   4336  O   ILE A 543      20.900  57.645  87.972  1.00 30.73
ATOM   4337  CB  ILE A 543      20.340  57.627  84.585  1.00 23.75
ATOM   4338  CG1 ILE A 543      20.369  58.664  83.468  1.00 24.09
ATOM   4339  CG2 ILE A 543      18.955  57.572  85.182  1.00 22.99
ATOM   4340  CD1 ILE A 543      20.386  60.109  83.982  1.00 27.34
ATOM   4341  N   GLN A 544      21.440  55.884  86.695  1.00 27.99
ATOM   4342  CA  GLN A 544      21.320  54.929  87.756  1.00 25.72
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ATOM   4343  C   GLN A 544      22.243  55.269  88.901  1.00 26.34
ATOM   4344  O   GLN A 544      22.029  54.826  90.014  1.00 26.24
ATOM   4345  CB  GLN A 544      21.562  53.512  87.210  1.00 26.76
ATOM   4346  CG  GLN A 544      20.355  52.955  86.432  1.00 17.74
ATOM   4347  CD  GLN A 544      20.598  51.604  85.743  1.00 32.62
ATOM   4348  OE1 GLN A 544      20.326  51.432  84.551  1.00 38.66
ATOM   4349  NE2 GLN A 544      21.063  50.627  86.494  1.00 14.93
ATOM   4350  N   SER A 545      23.286  56.033  88.625  1.00 21.73
ATOM   4351  CA  SER A 545      24.187  56.392  89.685  1.00 22.42
ATOM   4352  C   SER A 545      23.819  57.726  90.287  1.00 33.67
ATOM   4353  O   SER A 545      24.567  58.257  91.133  1.00 37.22
ATOM   4354  CB  SER A 545      25.646  56.322  89.338  1.00 21.57
ATOM   4355  OG  SER A 545      25.980  54.968  89.163  1.00 31.72
ATOM   4356  N   LYS A 546      22.662  58.251  89.841  1.00 23.09
ATOM   4357  CA  LYS A 546      22.135  59.490  90.356  1.00 20.79
ATOM   4358  C   LYS A 546      22.887  60.738  89.961  1.00 27.55
ATOM   4359  O   LYS A 546      23.001  61.655  90.771  1.00 27.95
ATOM   4360  CB  LYS A 546      22.126  59.449  91.881  1.00 21.71
ATOM   4361  CG  LYS A 546      21.498  58.195  92.484  1.00 15.90
ATOM   4362  CD  LYS A 546      20.245  57.814  91.731  1.00 39.84
ATOM   4363  CE  LYS A 546      19.355  56.850  92.498  1.00 45.16
ATOM   4364  NZ  LYS A 546      18.197  56.399  91.704  1.00 40.14
ATOM   4365  N   TRP A 547      23.414  60.776  88.753  1.00 23.26
ATOM   4366  CA  TRP A 547      24.141  61.931  88.289  1.00 21.90
ATOM   4367  C   TRP A 547      23.221  62.901  87.570  1.00 29.82
ATOM   4368  O   TRP A 547      22.808  62.679  86.432  1.00 34.91
ATOM   4369  CB  TRP A 547      25.262  61.500  87.361  1.00 21.04
ATOM   4370  CG  TRP A 547      26.254  62.591  87.206  1.00 22.57
ATOM   4371  CD1 TRP A 547      26.224  63.769  87.844  1.00 25.87
ATOM   4372  CD2 TRP A 547      27.437  62.588  86.417  1.00 23.40
ATOM   4373  NE1 TRP A 547      27.316  64.511  87.517  1.00 25.64
ATOM   4374  CE2 TRP A 547      28.081  63.819  86.635  1.00 27.46
ATOM   4375  CE3 TRP A 547      28.014  61.668  85.547  1.00 26.21
ATOM   4376  CZ2 TRP A 547      29.279  64.162  85.995  1.00 27.44
ATOM   4377  CZ3 TRP A 547      29.195  62.009  84.923  1.00 28.70
ATOM   4378  CH2 TRP A 547      29.822  63.236  85.138  1.00 28.41
ATOM   4379  N   GLU A 548      22.888  63.995  88.227  1.00 22.95
ATOM   4380  CA  GLU A 548      21.979  64.970  87.649  1.00 20.70
ATOM   4381  C   GLU A 548      22.419  65.473  86.305  1.00 28.32
ATOM   4382  O   GLU A 548      21.598  65.735  85.391  1.00 29.41
ATOM   4383  CB  GLU A 548      21.635  66.144  88.607  1.00 22.45
ATOM   4384  CG  GLU A 548      20.884  65.709  89.919  1.00 30.56
ATOM   4385  CD  GLU A 548      20.337  66.848  90.765  1.00 59.35
ATOM   4386  OE1 GLU A 548      20.336  68.021  90.413  1.00 81.52
ATOM   4387  OE2 GLU A 548      19.888  66.450  91.925  1.00 57.05
ATOM   4388  N   ASP A 549      23.728  65.661  86.201  1.00 24.72
ATOM   4389  CA  ASP A 549      24.276  66.190  84.981  1.00 21.48
ATOM   4390  C   ASP A 549      23.914  65.359  83.795  1.00 30.08
ATOM   4391  O   ASP A 549      23.760  65.869  82.697  1.00 32.05
ATOM   4392  CB  ASP A 549      25.775  66.480  85.048  1.00 21.28
ATOM   4393  CG  ASP A 549      26.076  67.463  86.130  1.00 37.74
ATOM   4394  OD1 ASP A 549      25.432  68.479  86.297  1.00 48.21
ATOM   4395  OD2 ASP A 549      27.076  67.115  86.882  1.00 46.51
ATOM   4396  N   ALA A 550      23.766  64.073  84.032  1.00 27.68
ATOM   4397  CA  ALA A 550      23.445  63.133  82.965  1.00 26.74
ATOM   4398  C   ALA A 550      22.019  63.171  82.431  1.00 32.35
ATOM   4399  O   ALA A 550      21.745  62.615  81.361  1.00 31.95
ATOM   4400  CB  ALA A 550      23.812  61.713  83.372  1.00 25.48
ATOM   4401  N   ILE A 551      21.123  63.795  83.192  1.00 28.71
ATOM   4402  CA  ILE A 551      19.716  63.882  82.832  1.00 28.20
ATOM   4403  C   ILE A 551      19.461  64.355  81.411  1.00 32.04
ATOM   4404  O   ILE A 551      18.833  63.679  80.619  1.00 31.75
ATOM   4405  CB  ILE A 551      18.876  64.641  83.868  1.00 30.29
ATOM   4406  CG1 ILE A 551      19.038  63.985  85.226  1.00 31.50
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ATOM   4407  CG2 ILE A 551      17.391  64.661  83.475  1.00 24.75
ATOM   4408  CD1 ILE A 551      18.072  64.561  86.253  1.00 31.62
ATOM   4409  N   PRO A 552      19.969  65.529  81.099  1.00 33.75
ATOM   4410  CA  PRO A 552      19.793  66.121  79.796  1.00 32.60
ATOM   4411  C   PRO A 552      20.240  65.224  78.669  1.00 30.34
ATOM   4412  O   PRO A 552      19.583  65.119  77.622  1.00 27.23
ATOM   4413  CB  PRO A 552      20.659  67.383  79.787  1.00 34.45
ATOM   4414  CG  PRO A 552      21.348  67.500  81.139  1.00 38.39
ATOM   4415  CD  PRO A 552      20.934  66.296  81.950  1.00 34.48
ATOM   4416  N   LEU A 553      21.391  64.616  78.891  1.00 23.74
ATOM   4417  CA  LEU A 553      21.997  63.727  77.931  1.00 22.72
ATOM   4418  C   LEU A 553      21.138  62.522  77.670  1.00 32.68
ATOM   4419  O   LEU A 553      21.015  62.087  76.523  1.00 35.70
ATOM   4420  CB  LEU A 553      23.362  63.281  78.439  1.00 21.57
ATOM   4421  CG  LEU A 553      24.196  64.496  78.818  1.00 24.02
ATOM   4422  CD1 LEU A 553      25.608  64.071  79.174  1.00 19.59
ATOM   4423  CD2 LEU A 553      24.188  65.479  77.630  1.00 18.60
ATOM   4424  N   ALA A 554      20.563  61.973  78.754  1.00 30.05
ATOM   4425  CA  ALA A 554      19.726  60.779  78.669  1.00 27.72
ATOM   4426  C   ALA A 554      18.432  61.107  77.988  1.00 36.03
ATOM   4427  O   ALA A 554      17.944  60.332  77.163  1.00 37.08
ATOM   4428  CB  ALA A 554      19.475  60.165  80.017  1.00 26.78
ATOM   4429  N   LEU A 555      17.898  62.283  78.320  1.00 29.70
ATOM   4430  CA  LEU A 555      16.644  62.724  77.720  1.00 28.32
ATOM   4431  C   LEU A 555      16.803  62.902  76.229  1.00 29.19
ATOM   4432  O   LEU A 555      15.970  62.506  75.385  1.00 26.13
ATOM   4433  CB  LEU A 555      16.110  64.027  78.342  1.00 28.26
ATOM   4434  CG  LEU A 555      15.371  63.814  79.666  1.00 32.76
ATOM   4435  CD1 LEU A 555      15.360  65.118  80.464  1.00 34.66
ATOM   4436  CD2 LEU A 555      13.938  63.334  79.427  1.00 27.50
ATOM   4437  N   LYS A 556      17.922  63.524  75.950  1.00 28.45
ATOM   4438  CA  LYS A 556      18.325  63.839  74.615  1.00 28.76
ATOM   4439  C   LYS A 556      18.369  62.591  73.800  1.00 35.11
ATOM   4440  O   LYS A 556      17.670  62.491  72.796  1.00 41.80
ATOM   4441  CB  LYS A 556      19.645  64.592  74.599  1.00 31.79
ATOM   4442  CG  LYS A 556      20.101  65.139  73.250  1.00 63.55
ATOM   4443  CD  LYS A 556      21.585  65.518  73.254  1.00 81.77
ATOM   4444  CE  LYS A 556      22.046  66.270  72.011  1.00 79.68
ATOM   4445  NZ  LYS A 556      23.239  65.661  71.401  1.00 73.00
ATOM   4446  N   MET A 557      19.154  61.623  74.248  1.00 26.96
ATOM   4447  CA  MET A 557      19.305  60.364  73.514  1.00 23.97
ATOM   4448  C   MET A 557      18.033  59.553  73.287  1.00 30.96
ATOM   4449  O   MET A 557      17.811  58.907  72.263  1.00 23.24
ATOM   4450  CB  MET A 557      20.401  59.488  74.104  1.00 24.89
ATOM   4451  CG  MET A 557      20.533  58.163  73.368  1.00 29.37
ATOM   4452  SD  MET A 557      22.029  57.276  73.864  1.00 33.21
ATOM   4453  CE  MET A 557      21.939  55.812  72.793  1.00 30.16
ATOM   4454  N   ALA A 558      17.203  59.568  74.287  1.00 33.42
ATOM   4455  CA  ALA A 558      16.000  58.816  74.194  1.00 33.03
ATOM   4456  C   ALA A 558      15.042  59.345  73.163  1.00 38.12
ATOM   4457  O   ALA A 558      14.349  58.568  72.543  1.00 37.09
ATOM   4458  CB  ALA A 558      15.317  58.780  75.553  1.00 32.89
ATOM   4459  N   THR A 559      14.994  60.665  73.032  1.00 36.76
ATOM   4460  CA  THR A 559      14.067  61.326  72.144  1.00 36.43
ATOM   4461  C   THR A 559      14.588  61.590  70.794  1.00 41.71
ATOM   4462  O   THR A 559      13.788  61.768  69.891  1.00 44.66
ATOM   4463  CB  THR A 559      13.615  62.705  72.694  1.00 43.70
ATOM   4464  OG1 THR A 559      14.728  63.545  72.957  1.00 38.88
ATOM   4465  CG2 THR A 559      12.764  62.549  73.942  1.00 44.95
ATOM   4466  N   GLU A 560      15.897  61.695  70.674  1.00 37.38
ATOM   4467  CA  GLU A 560      16.495  62.018  69.395  1.00 36.51
ATOM   4468  C   GLU A 560      16.652  60.846  68.448  1.00 40.11
ATOM   4469  O   GLU A 560      17.003  61.052  67.300  1.00 43.23
ATOM   4470  CB  GLU A 560      17.799  62.820  69.519  1.00 38.13
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ATOM   4471  CG  GLU A 560      17.653  64.142  70.292  1.00 54.29
ATOM   4472  CD  GLU A 560      18.857  65.043  70.127  1.00 78.42
ATOM   4473  OE1 GLU A 560      19.960  64.639  69.812  1.00 32.69
ATOM   4474  OE2 GLU A 560      18.593  66.303  70.380  1.00 85.90
ATOM   4475  N   GLN A 561      16.425  59.627  68.955  1.00 30.45
ATOM   4476  CA  GLN A 561      16.467  58.356  68.230  1.00 22.57
ATOM   4477  C   GLN A 561      15.398  57.523  68.878  1.00 26.95
ATOM   4478  O   GLN A 561      14.978  57.814  69.975  1.00 27.79
ATOM   4479  CB  GLN A 561      17.829  57.661  68.128  1.00 20.64
ATOM   4480  CG  GLN A 561      18.470  57.290  69.491  1.00 22.59
ATOM   4481  CD  GLN A 561      17.802  56.121  70.184  1.00 28.22
ATOM   4482  OE1 GLN A 561      17.524  56.156  71.400  1.00 37.44
ATOM   4483  NE2 GLN A 561      17.556  55.069  69.419  1.00 31.92
ATOM   4484  N   GLY A 562      14.888  56.535  68.209  1.00 26.16
ATOM   4485  CA  GLY A 562      13.801  55.810  68.858  1.00 27.83
ATOM   4486  C   GLY A 562      13.932  54.320  68.761  1.00 41.56
ATOM   4487  O   GLY A 562      12.936  53.614  68.677  1.00 45.37
ATOM   4488  N   ARG A 563      15.171  53.864  68.742  1.00 37.40
ATOM   4489  CA  ARG A 563      15.457  52.453  68.689  1.00 34.41
ATOM   4490  C   ARG A 563      15.121  51.939  70.109  1.00 39.48
ATOM   4491  O   ARG A 563      15.832  52.221  71.087  1.00 40.29
ATOM   4492  CB  ARG A 563      16.932  52.231  68.284  1.00 18.23
ATOM   4493  CG  ARG A 563      17.309  50.755  68.169  1.00 20.07
ATOM   4494  CD  ARG A 563      18.779  50.514  68.512  1.00 25.07
ATOM   4495  NE  ARG A 563      19.234  49.139  68.320  1.00 25.66
ATOM   4496  CZ  ARG A 563      20.425  48.891  67.821  1.00 26.35
ATOM   4497  NH1 ARG A 563      21.257  49.860  67.430  1.00 12.96
ATOM   4498  NH2 ARG A 563      20.804  47.636  67.656  1.00 30.31
ATOM   4499  N   MET A 564      13.989  51.228  70.239  1.00 33.12
ATOM   4500  CA  MET A 564      13.487  50.695  71.526  1.00 31.84
ATOM   4501  C   MET A 564      14.565  50.247  72.532  1.00 31.42
ATOM   4502  O   MET A 564      14.494  50.501  73.744  1.00 25.72
ATOM   4503  CB  MET A 564      12.323  49.682  71.365  1.00 32.45
ATOM   4504  CG  MET A 564      11.196  50.225  70.487  1.00 35.78
ATOM   4505  SD  MET A 564       9.695  49.205  70.533  1.00 40.85
ATOM   4506  CE  MET A 564      10.177  47.892  69.382  1.00 35.87
ATOM   4507  N   LYS A 565      15.562  49.581  71.966  1.00 31.68
ATOM   4508  CA  LYS A 565      16.699  49.041  72.668  1.00 29.04
ATOM   4509  C   LYS A 565      17.281  50.089  73.562  1.00 26.36
ATOM   4510  O   LYS A 565      17.648  49.782  74.673  1.00 21.19
ATOM   4511  CB  LYS A 565      17.747  48.494  71.697  1.00 29.06
ATOM   4512  CG  LYS A 565      18.864  47.715  72.359  1.00 23.89
ATOM   4513  CD  LYS A 565      19.982  47.355  71.392  1.00 35.75
ATOM   4514  CE  LYS A 565      20.796  46.153  71.842  1.00 36.31
ATOM   4515  NZ  LYS A 565      22.233  46.311  71.577  1.00 44.91
ATOM   4516  N   PHE A 566      17.321  51.321  73.073  1.00 22.91
ATOM   4517  CA  PHE A 566      17.866  52.423  73.833  1.00 24.36
ATOM   4518  C   PHE A 566      16.814  53.253  74.571  1.00 30.37
ATOM   4519  O   PHE A 566      16.882  53.540  75.758  1.00 30.52
ATOM   4520  CB  PHE A 566      18.622  53.355  72.857  1.00 25.26
ATOM   4521  CG  PHE A 566      19.738  52.677  72.088  1.00 24.09
ATOM   4522  CD1 PHE A 566      20.392  51.559  72.609  1.00 23.51
ATOM   4523  CD2 PHE A 566      20.165  53.187  70.858  1.00 24.48
ATOM   4524  CE1 PHE A 566      21.432  50.958  71.900  1.00 23.73
ATOM   4525  CE2 PHE A 566      21.211  52.620  70.129  1.00 24.75
ATOM   4526  CZ  PHE A 566      21.828  51.491  70.668  1.00 25.20
ATOM   4527  N   THR A 567      15.860  53.679  73.801  1.00 31.17
ATOM   4528  CA  THR A 567      14.783  54.533  74.239  1.00 31.74
ATOM   4529  C   THR A 567      13.985  54.037  75.458  1.00 33.79
ATOM   4530  O   THR A 567      13.657  54.818  76.373  1.00 26.01
ATOM   4531  CB  THR A 567      13.895  54.892  73.017  1.00 36.51
ATOM   4532  OG1 THR A 567      14.527  55.844  72.138  1.00 24.12
ATOM   4533  CG2 THR A 567      12.522  55.361  73.473  1.00 34.94
ATOM   4534  N   ARG A 568      13.663  52.726  75.469  1.00 30.74
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ATOM   4535  CA  ARG A 568      12.864  52.166  76.545  1.00 26.30
ATOM   4536  C   ARG A 568      13.486  52.226  77.882  1.00 28.61
ATOM   4537  O   ARG A 568      12.876  52.667  78.832  1.00 30.84
ATOM   4538  CB  ARG A 568      12.315  50.798  76.251  1.00 18.11
ATOM   4539  CG  ARG A 568      11.342  50.919  75.088  1.00 29.19
ATOM   4540  CD  ARG A 568      10.550  49.660  74.799  1.00 19.19
ATOM   4541  NE  ARG A 568       9.707  49.343  75.917  1.00 28.72
ATOM   4542  CZ  ARG A 568       9.254  48.138  76.133  1.00 32.39
ATOM   4543  NH1 ARG A 568       9.528  47.144  75.291  1.00 29.79
ATOM   4544  NH2 ARG A 568       8.507  47.930  77.208  1.00 16.44
ATOM   4545  N   PRO A 569      14.705  51.774  77.925  1.00 28.41
ATOM   4546  CA  PRO A 569      15.447  51.709  79.154  1.00 28.01
ATOM   4547  C   PRO A 569      15.890  53.042  79.663  1.00 32.18
ATOM   4548  O   PRO A 569      15.974  53.256  80.869  1.00 29.25
ATOM   4549  CB  PRO A 569      16.607  50.732  78.919  1.00 28.83
ATOM   4550  CG  PRO A 569      16.330  50.034  77.592  1.00 32.42
ATOM   4551  CD  PRO A 569      15.234  50.829  76.893  1.00 29.82
ATOM   4552  N   LEU A 570      16.143  53.949  78.741  1.00 31.95
ATOM   4553  CA  LEU A 570      16.560  55.270  79.160  1.00 35.11
ATOM   4554  C   LEU A 570      15.407  55.962  79.897  1.00 36.24
ATOM   4555  O   LEU A 570      15.532  56.506  81.028  1.00 34.02
ATOM   4556  CB  LEU A 570      17.021  56.110  77.932  1.00 37.06
ATOM   4557  CG  LEU A 570      18.387  55.701  77.343  1.00 41.39
ATOM   4558  CD1 LEU A 570      18.678  56.462  76.050  1.00 41.06
ATOM   4559  CD2 LEU A 570      19.497  55.984  78.353  1.00 37.42
ATOM   4560  N   PHE A 571      14.262  55.944  79.211  1.00 30.06
ATOM   4561  CA  PHE A 571      13.084  56.541  79.758  1.00 27.27
ATOM   4562  C   PHE A 571      12.813  55.899  81.095  1.00 25.94
ATOM   4563  O   PHE A 571      12.399  56.536  82.030  1.00 27.16
ATOM   4564  CB  PHE A 571      11.888  56.375  78.828  1.00 27.60
ATOM   4565  CG  PHE A 571      11.546  57.616  78.042  1.00 27.70
ATOM   4566  CD1 PHE A 571      11.193  58.820  78.651  1.00 29.97
ATOM   4567  CD2 PHE A 571      11.557  57.570  76.651  1.00 28.87
ATOM   4568  CE1 PHE A 571      10.861  59.953  77.910  1.00 28.24
ATOM   4569  CE2 PHE A 571      11.233  58.684  75.886  1.00 30.43
ATOM   4570  CZ  PHE A 571      10.877  59.875  76.520  1.00 29.55
ATOM   4571  N   LYS A 572      13.089  54.618  81.196  1.00 22.77
ATOM   4572  CA  LYS A 572      12.845  53.946  82.468  1.00 25.43
ATOM   4573  C   LYS A 572      13.783  54.425  83.561  1.00 34.48
ATOM   4574  O   LYS A 572      13.351  54.920  84.602  1.00 35.11
ATOM   4575  CB  LYS A 572      12.736  52.428  82.392  1.00 26.89
ATOM   4576  CG  LYS A 572      11.303  51.911  82.326  1.00 44.03
ATOM   4577  CD  LYS A 572      11.219  50.426  81.922  1.00 57.87
ATOM   4578  CE  LYS A 572      10.975  50.204  80.422  1.00 65.25
ATOM   4579  NZ  LYS A 572      11.535  48.954  79.850  1.00 61.06
ATOM   4580  N   ASP A 573      15.074  54.292  83.319  1.00 31.94
ATOM   4581  CA  ASP A 573      16.032  54.751  84.291  1.00 30.55
ATOM   4582  C   ASP A 573      15.684  56.166  84.712  1.00 32.26
ATOM   4583  O   ASP A 573      15.693  56.453  85.895  1.00 31.85
ATOM   4584  CB  ASP A 573      17.453  54.788  83.718  1.00 32.87
ATOM   4585  CG  ASP A 573      18.051  53.443  83.487  1.00 33.43
ATOM   4586  OD1 ASP A 573      17.517  52.422  83.853  1.00 29.11
ATOM   4587  OD2 ASP A 573      19.206  53.501  82.864  1.00 35.22
ATOM   4588  N   LEU A 574      15.387  57.071  83.745  1.00 29.50
ATOM   4589  CA  LEU A 574      15.062  58.461  84.109  1.00 27.65
ATOM   4590  C   LEU A 574      13.887  58.577  85.075  1.00 32.88
ATOM   4591  O   LEU A 574      13.864  59.411  85.962  1.00 31.04
ATOM   4592  CB  LEU A 574      14.844  59.385  82.909  1.00 26.24
ATOM   4593  CG  LEU A 574      16.068  59.567  82.027  1.00 30.41
ATOM   4594  CD1 LEU A 574      15.644  59.922  80.582  1.00 28.47
ATOM   4595  CD2 LEU A 574      16.974  60.659  82.604  1.00 27.06
ATOM   4596  N   ALA A 575      12.895  57.723  84.874  1.00 32.80
ATOM   4597  CA  ALA A 575      11.709  57.713  85.711  1.00 31.11
ATOM   4598  C   ALA A 575      12.002  57.140  87.083  1.00 35.71
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ATOM	4599	O	ALA	A	575	11.309	57.362	88.055	1.00 39.91
ATOM	4600	CB	ALA	A	575	10.631	56.890	85.024	1.00 30.56
ATOM	4601	N	ALA	A	576	13.049	56.364	87.170	1.00 28.55
ATOM	4602	CA	ALA	A	576	13.390	55.778	88.448	1.00 22.80
ATOM	4603	C	ALA	A	576	14.258	56.724	89.266	1.00 26.93
ATOM	4604	O	ALA	A	576	14.444	56.591	90.461	1.00 30.45
ATOM	4605	CB	ALA	A	576	14.023	54.415	88.245	1.00 20.31
ATOM	4606	N	PHE	A	577	14.787	57.686	88.584	1.00 22.86
ATOM	4607	CA	PHE	A	577	15.604	58.673	89.194	1.00 22.71
ATOM	4608	C	PHE	A	577	14.651	59.751	89.673	1.00 32.25
ATOM	4609	O	PHE	A	577	13.930	60.334	88.863	1.00 34.17
ATOM	4610	CB	PHE	A	577	16.640	59.188	88.154	1.00 22.89
ATOM	4611	CG	PHE	A	577	17.704	60.076	88.741	1.00 23.16
ATOM	4612	CD1	PHE	A	577	17.847	60.231	90.120	1.00 26.60
ATOM	4613	CD2	PHE	A	577	18.561	60.806	87.914	1.00 23.46
ATOM	4614	CE1	PHE	A	577	18.818	61.082	90.661	1.00 27.55
ATOM	4615	CE2	PHE	A	577	19.543	61.657	88.431	1.00 23.88
ATOM	4616	CZ	PHE	A	577	19.669	61.791	89.813	1.00 23.59
ATOM	4617	N	ASP	A	578	14.625	60.008	90.990	1.00 29.70
ATOM	4618	CA	ASP	A	578	13.717	61.018	91.533	1.00 28.65
ATOM	4619	C	ASP	A	578	13.862	62.357	90.881	1.00 28.55
ATOM	4620	O	ASP	A	578	12.877	63.004	90.599	1.00 32.65
ATOM	4621	CB	ASP	A	578	13.804	61.192	93.055	1.00 32.60
ATOM	4622	CG	ASP	A	578	15.153	61.647	93.550	1.00 53.21
ATOM	4623	OD1	ASP	A	578	16.175	61.594	92.872	1.00 51.81
ATOM	4624	OD2	ASP	A	578	15.104	62.072	94.796	1.00 64.93
ATOM	4625	N	LYS	A	579	15.104	62.750	90.674	1.00 20.12
ATOM	4626	CA	LYS	A	579	15.470	64.012	90.084	1.00 21.01
ATOM	4627	C	LYS	A	579	14.934	64.270	88.697	1.00 30.25
ATOM	4628	O	LYS	A	579	14.620	65.413	88.368	1.00 35.12
ATOM	4629	CB	LYS	A	579	16.982	64.223	90.104	1.00 24.11
ATOM	4630	CG	LYS	A	579	17.552	64.202	91.512	1.00 48.98
ATOM	4631	CD	LYS	A	579	17.252	65.488	92.286	1.00 76.92
ATOM	4632	CE	LYS	A	579	16.495	65.258	93.588	1.00 87.93
ATOM	4633	NZ	LYS	A	579	17.282	64.550	94.611	1.00 89.56
ATOM	4634	N	SER	A	580	14.838	63.244	87.857	1.00 28.66
ATOM	4635	CA	SER	A	580	14.368	63.437	86.459	1.00 28.56
ATOM	4636	C	SER	A	580	13.007	62.829	86.129	1.00 32.95
ATOM	4637	O	SER	A	580	12.561	62.870	84.992	1.00 35.30
ATOM	4638	CB	SER	A	580	15.337	62.774	85.517	1.00 25.69
ATOM	4639	OG	SER	A	580	15.476	61.424	85.969	1.00 25.12
ATOM	4640	N	HIS	A	581	12.364	62.230	87.098	1.00 26.81
ATOM	4641	CA	HIS	A	581	11.100	61.595	86.850	1.00 28.26
ATOM	4642	C	HIS	A	581	10.067	62.399	86.042	1.00 36.50
ATOM	4643	O	HIS	A	581	9.644	62.031	84.927	1.00 34.71
ATOM	4644	CB	HIS	A	581	10.553	61.047	88.152	1.00 29.76
ATOM	4645	CG	HIS	A	581	9.148	60.588	87.968	1.00 35.31
ATOM	4646	ND1	HIS	A	581	8.111	61.494	87.899	1.00 38.92
ATOM	4647	CD2	HIS	A	581	8.634	59.338	87.891	1.00 36.84
ATOM	4648	CE1	HIS	A	581	6.999	60.783	87.817	1.00 38.85
ATOM	4649	NE2	HIS	A	581	7.280	59.488	87.734	1.00 38.13
ATOM	4650	N	ASP	A	582	9.656	63.502	86.639	1.00 35.79
ATOM	4651	CA	ASP	A	582	8.680	64.388	86.064	1.00 34.39
ATOM	4652	C	ASP	A	582	9.035	64.807	84.659	1.00 37.82
ATOM	4653	O	ASP	A	582	8.220	64.704	83.735	1.00 37.01
ATOM	4654	CB	ASP	A	582	8.428	65.552	87.001	1.00 36.57
ATOM	4655	CG	ASP	A	582	7.597	65.110	88.167	1.00 58.09
ATOM	4656	OD1	ASP	A	582	6.708	64.289	88.070	1.00 63.17
ATOM	4657	OD2	ASP	A	582	7.920	65.708	89.279	1.00 73.96
ATOM	4658	N	GLN	A	583	10.272	65.255	84.488	1.00 32.88
ATOM	4659	CA	GLN	A	583	10.750	65.648	83.169	1.00 29.92
ATOM	4660	C	GLN	A	583	10.690	64.464	82.168	1.00 37.12
ATOM	4661	O	GLN	A	583	10.362	64.624	80.990	1.00 37.42
ATOM	4662	CB	GLN	A	583	12.172	66.182	83.287	1.00 28.54

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ATOM   4663  CG  GLN A 583      12.704  66.648  81.929  1.00 48.12
ATOM   4664  CD  GLN A 583      13.957  67.475  82.081  1.00 64.09
ATOM   4665  OE1 GLN A 583      14.736  67.248  83.015  1.00 59.43
ATOM   4666  NE2 GLN A 583      14.130  68.461  81.201  1.00 55.34
ATOM   4667  N   ALA A 584      11.009  63.250  82.638  1.00 33.22
ATOM   4668  CA  ALA A 584      10.964  62.062  81.780  1.00 32.22
ATOM   4669  C   ALA A 584       9.557  61.841  81.315  1.00 37.45
ATOM   4670  O   ALA A 584       9.319  61.526  80.152  1.00 40.05
ATOM   4671  CB  ALA A 584      11.389  60.793  82.504  1.00 31.62
ATOM   4672  N   VAL A 585       8.622  61.995  82.261  1.00 30.42
ATOM   4673  CA  VAL A 585       7.217  61.806  81.946  1.00 29.16
ATOM   4674  C   VAL A 585       6.647  62.909  81.024  1.00 36.53
ATOM   4675  O   VAL A 585       5.933  62.690  80.052  1.00 36.22
ATOM   4676  CB  VAL A 585       6.408  61.567  83.209  1.00 29.78
ATOM   4677  CG1 VAL A 585       4.959  61.947  82.955  1.00 30.03
ATOM   4678  CG2 VAL A 585       6.464  60.085  83.539  1.00 27.82
ATOM   4679  N   ARG A 586       7.000  64.123  81.333  1.00 35.76
ATOM   4680  CA  ARG A 586       6.574  65.242  80.562  1.00 36.20
ATOM   4681  C   ARG A 586       7.146  65.125  79.180  1.00 44.65
ATOM   4682  O   ARG A 586       6.459  65.355  78.197  1.00 48.32
ATOM   4683  CB  ARG A 586       7.116  66.498  81.208  1.00 38.13
ATOM   4684  CG  ARG A 586       6.744  67.799  80.518  1.00 61.01
ATOM   4685  CD  ARG A 586       7.077  69.029  81.354  1.00 73.03
ATOM   4686  NE  ARG A 586       8.491  69.128  81.711  1.00 86.05
ATOM   4687  CZ  ARG A 586       8.961  69.001  82.957  1.00 98.46
ATOM   4688  NH1 ARG A 586       8.167  68.741  84.004  1.00 79.75
ATOM   4689  NH2 ARG A 586      10.268  69.103  83.159  1.00 77.55
ATOM   4690  N   THR A 587       8.426  64.769  79.110  1.00 39.49
ATOM   4691  CA  THR A 587       9.099  64.646  77.822  1.00 36.80
ATOM   4692  C   THR A 587       8.387  63.690  76.869  1.00 37.11
ATOM   4693  O   THR A 587       8.229  63.931  75.678  1.00 36.91
ATOM   4694  CB  THR A 587      10.634  64.384  77.917  1.00 39.40
ATOM   4695  OG1 THR A 587      11.303  65.334  78.717  1.00 46.27
ATOM   4696  CG2 THR A 587      11.233  64.460  76.529  1.00 32.60
ATOM   4697  N   TYR A 588       7.934  62.587  77.393  1.00 33.33
ATOM   4698  CA  TYR A 588       7.252  61.639  76.555  1.00 33.94
ATOM   4699  C   TYR A 588       5.890  62.146  76.090  1.00 37.02
ATOM   4700  O   TYR A 588       5.428  61.880  74.988  1.00 41.55
ATOM   4701  CB  TYR A 588       7.042  60.383  77.396  1.00 33.96
ATOM   4702  CG  TYR A 588       6.017  59.440  76.851  1.00 33.08
ATOM   4703  CD1 TYR A 588       6.331  58.640  75.754  1.00 35.64
ATOM   4704  CD2 TYR A 588       4.758  59.288  77.437  1.00 34.09
ATOM   4705  CE1 TYR A 588       5.424  57.703  75.251  1.00 34.36
ATOM   4706  CE2 TYR A 588       3.822  58.378  76.932  1.00 34.05
ATOM   4707  CZ  TYR A 588       4.162  57.581  75.834  1.00 33.89
ATOM   4708  OH  TYR A 588       3.275  56.674  75.322  1.00 23.43
ATOM   4709  N   GLN A 589       5.216  62.853  76.959  1.00 25.04
ATOM   4710  CA  GLN A 589       3.914  63.339  76.612  1.00 21.41
ATOM   4711  C   GLN A 589       3.992  64.304  75.481  1.00 28.78
ATOM   4712  O   GLN A 589       3.099  64.410  74.678  1.00 31.24
ATOM   4713  CB  GLN A 589       3.241  63.935  77.832  1.00 21.73
ATOM   4714  CG  GLN A 589       2.878  62.820  78.827  1.00 22.30
ATOM   4715  CD  GLN A 589       1.695  62.069  78.293  1.00 52.83
ATOM   4716  OE1 GLN A 589       1.511  62.003  77.075  1.00 60.15
ATOM   4717  NE2 GLN A 589       0.864  61.542  79.182  1.00 53.04
ATOM   4718  N   GLU A 590       5.099  65.001  75.409  1.00 28.36
ATOM   4719  CA  GLU A 590       5.276  65.966  74.355  1.00 26.87
ATOM   4720  C   GLU A 590       5.840  65.338  73.140  1.00 35.10
ATOM   4721  O   GLU A 590       6.096  66.059  72.171  1.00 40.28
ATOM   4722  CB  GLU A 590       6.323  67.011  74.747  1.00 27.61
ATOM   4723  CG  GLU A 590       5.846  67.954  75.847  1.00 44.11
ATOM   4724  CD  GLU A 590       6.981  68.759  76.388  1.00 75.35
ATOM   4725  OE1 GLU A 590       8.120  68.689  75.925  1.00 54.78
ATOM   4726  OE2 GLU A 590       6.609  69.516  77.403  1.00 59.46
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ATOM   4727  N   HIS A 591       6.091  64.031  73.207  1.00 27.57
ATOM   4728  CA  HIS A 591       6.713  63.384  72.086  1.00 25.58
ATOM   4729  C   HIS A 591       5.928  62.249  71.578  1.00 32.34
ATOM   4730  O   HIS A 591       6.184  61.751  70.496  1.00 38.53
ATOM   4731  CB  HIS A 591       8.094  62.851  72.487  1.00 26.32
ATOM   4732  CG  HIS A 591       9.219  63.809  72.268  1.00 31.06
ATOM   4733  ND1 HIS A 591       9.630  64.680  73.255  1.00 32.65
ATOM   4734  CD2 HIS A 591       9.998  64.032  71.169  1.00 34.91
ATOM   4735  CE1 HIS A 591      10.635  65.404  72.756  1.00 32.01
ATOM   4736  NE2 HIS A 591      10.884  65.037  71.508  1.00 33.36
ATOM   4737  N   LYS A 592       4.978  61.812  72.337  1.00 28.34
ATOM   4738  CA  LYS A 592       4.254  60.643  71.849  1.00 29.96
ATOM   4739  C   LYS A 592       3.654  60.692  70.432  1.00 33.41
ATOM   4740  O   LYS A 592       3.819  59.769  69.592  1.00 29.05
ATOM   4741  CB  LYS A 592       3.362  59.983  72.888  1.00 32.83
ATOM   4742  CG  LYS A 592       2.435  60.930  73.615  1.00 31.14
ATOM   4743  CD  LYS A 592       1.677  60.203  74.704  1.00 38.97
ATOM   4744  CE  LYS A 592       0.253  60.691  74.890  1.00 25.02
ATOM   4745  NZ  LYS A 592      -0.157  60.632  76.302  1.00 45.83
ATOM   4746  N   ALA A 593       2.934  61.782  70.187  1.00 30.97
ATOM   4747  CA  ALA A 593       2.260  62.026  68.917  1.00 28.47
ATOM   4748  C   ALA A 593       3.169  61.943  67.703  1.00 32.66
ATOM   4749  O   ALA A 593       2.775  61.488  66.639  1.00 36.77
ATOM   4750  CB  ALA A 593       1.571  63.379  68.954  1.00 27.35
ATOM   4751  N   SER A 594       4.384  62.405  67.869  1.00 27.08
ATOM   4752  CA  SER A 594       5.345  62.417  66.794  1.00 30.04
ATOM   4753  C   SER A 594       6.185  61.169  66.760  1.00 36.80
ATOM   4754  O   SER A 594       6.995  60.991  65.848  1.00 37.94
ATOM   4755  CB  SER A 594       6.292  63.596  66.977  1.00 37.69
ATOM   4756  OG  SER A 594       7.199  63.340  68.043  1.00 54.55
ATOM   4757  N   MET A 595       6.015  60.340  67.776  1.00 33.12
ATOM   4758  CA  MET A 595       6.794  59.115  67.898  1.00 33.96
ATOM   4759  C   MET A 595       6.200  57.936  67.125  1.00 40.91
ATOM   4760  O   MET A 595       5.019  57.927  66.809  1.00 50.82
ATOM   4761  CB  MET A 595       6.716  58.686  69.382  1.00 34.22
ATOM   4762  CG  MET A 595       7.621  59.371  70.399  1.00 34.61
ATOM   4763  SD  MET A 595       7.606  58.440  71.962  1.00 39.24
ATOM   4764  CE  MET A 595       7.145  59.779  73.084  1.00 36.72
ATOM   4765  N   HIS A 596       6.987  56.897  66.886  1.00 26.19
ATOM   4766  CA  HIS A 596       6.496  55.657  66.246  1.00 23.19
ATOM   4767  C   HIS A 596       5.438  54.964  67.120  1.00 25.21
ATOM   4768  O   HIS A 596       5.621  54.728  68.311  1.00 22.59
ATOM   4769  CB  HIS A 596       7.657  54.655  66.077  1.00 24.41
ATOM   4770  CG  HIS A 596       7.222  53.366  65.493  1.00 30.13
ATOM   4771  ND1 HIS A 596       7.606  52.995  64.214  1.00 32.86
ATOM   4772  CD2 HIS A 596       6.421  52.385  66.005  1.00 30.90
ATOM   4773  CE1 HIS A 596       7.047  51.824  63.974  1.00 30.05
ATOM   4774  NE2 HIS A 596       6.325  51.441  65.031  1.00 30.20
ATOM   4775  N   PRO A 597       4.334  54.587  66.512  1.00 27.08
ATOM   4776  CA  PRO A 597       3.217  53.912  67.173  1.00 26.35
ATOM   4777  C   PRO A 597       3.513  52.851  68.248  1.00 37.51
ATOM   4778  O   PRO A 597       2.979  52.900  69.348  1.00 41.16
ATOM   4779  CB  PRO A 597       2.334  53.307  66.076  1.00 26.17
ATOM   4780  CG  PRO A 597       3.140  53.426  64.792  1.00 34.56
ATOM   4781  CD  PRO A 597       4.285  54.418  65.050  1.00 30.06
ATOM   4782  N   VAL A 598       4.311  51.850  67.939  1.00 33.08
ATOM   4783  CA  VAL A 598       4.585  50.802  68.911  1.00 28.39
ATOM   4784  C   VAL A 598       5.444  51.307  70.029  1.00 29.32
ATOM   4785  O   VAL A 598       5.168  51.096  71.217  1.00 29.13
ATOM   4786  CB  VAL A 598       5.196  49.599  68.210  1.00 27.99
ATOM   4787  CG1 VAL A 598       5.806  48.608  69.187  1.00 26.98
ATOM   4788  CG2 VAL A 598       4.144  48.944  67.296  1.00 26.13
ATOM   4789  N   THR A 599       6.480  52.021  69.635  1.00 26.10
ATOM   4790  CA  THR A 599       7.370  52.573  70.631  1.00 26.95
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ATOM   4791  C   THR A 599       6.650  53.404  71.669  1.00 30.81
ATOM   4792  O   THR A 599       6.863  53.327  72.871  1.00 31.33
ATOM   4793  CB  THR A 599       8.413  53.455  69.975  1.00 26.67
ATOM   4794  OG1 THR A 599       9.092  52.725  68.958  1.00 27.92
ATOM   4795  CG2 THR A 599       9.358  53.884  71.092  1.00 20.69
ATOM   4796  N   ALA A 600       5.801  54.218  71.135  1.00 26.41
ATOM   4797  CA  ALA A 600       4.997  55.111  71.878  1.00 26.39
ATOM   4798  C   ALA A 600       4.176  54.339  72.860  1.00 32.00
ATOM   4799  O   ALA A 600       4.162  54.597  74.057  1.00 35.37
ATOM   4800  CB  ALA A 600       4.090  55.774  70.856  1.00 27.56
ATOM   4801  N   MET A 601       3.470  53.380  72.332  1.00 26.26
ATOM   4802  CA  MET A 601       2.627  52.585  73.167  1.00 26.60
ATOM   4803  C   MET A 601       3.439  51.909  74.225  1.00 25.73
ATOM   4804  O   MET A 601       3.099  51.964  75.381  1.00 25.77
ATOM   4805  CB  MET A 601       1.752  51.625  72.353  1.00 30.49
ATOM   4806  CG  MET A 601       1.024  50.594  73.176  1.00 36.00
ATOM   4807  SD  MET A 601       2.043  49.146  73.554  1.00 42.41
ATOM   4808  CE  MET A 601       1.693  48.128  72.111  1.00 37.75
ATOM   4809  N   LEU A 602       4.538  51.310  73.848  1.00 21.64
ATOM   4810  CA  LEU A 602       5.339  50.671  74.873  1.00 22.59
ATOM   4811  C   LEU A 602       6.010  51.650  75.870  1.00 29.61
ATOM   4812  O   LEU A 602       6.137  51.346  77.039  1.00 27.62
ATOM   4813  CB  LEU A 602       6.418  49.760  74.294  1.00 22.14
ATOM   4814  CG  LEU A 602       5.916  48.529  73.575  1.00 25.78
ATOM   4815  CD1 LEU A 602       7.021  48.087  72.609  1.00 26.02
ATOM   4816  CD2 LEU A 602       5.651  47.445  74.613  1.00 21.01
ATOM   4817  N   VAL A 603       6.508  52.805  75.445  1.00 27.15
ATOM   4818  CA  VAL A 603       7.145  53.684  76.413  1.00 26.39
ATOM   4819  C   VAL A 603       6.121  54.157  77.438  1.00 32.60
ATOM   4820  O   VAL A 603       6.436  54.235  78.621  1.00 35.31
ATOM   4821  CB  VAL A 603       7.917  54.832  75.760  1.00 27.78
ATOM   4822  CG1 VAL A 603       8.286  55.887  76.774  1.00 24.54
ATOM   4823  CG2 VAL A 603       9.172  54.286  75.094  1.00 27.29
ATOM   4824  N   GLY A 604       4.878  54.434  76.976  1.00 27.44
ATOM   4825  CA  GLY A 604       3.759  54.856  77.819  1.00 27.58
ATOM   4826  C   GLY A 604       3.418  53.797  78.905  1.00 37.00
ATOM   4827  O   GLY A 604       3.088  54.102  80.072  1.00 36.56
ATOM   4828  N   LYS A 605       3.511  52.522  78.520  1.00 32.54
ATOM   4829  CA  LYS A 605       3.250  51.415  79.459  1.00 32.17
ATOM   4830  C   LYS A 605       4.312  51.405  80.539  1.00 35.15
ATOM   4831  O   LYS A 605       4.040  51.347  81.734  1.00 33.77
ATOM   4832  CB  LYS A 605       3.231  50.034  78.782  1.00 33.59
ATOM   4833  CG  LYS A 605       1.837  49.438  78.576  1.00 42.45
ATOM   4834  CD  LYS A 605       1.846  48.115  77.815  1.00 60.83
ATOM   4835  CE  LYS A 605       1.223  46.946  78.578  1.00 86.38
ATOM   4836  NZ  LYS A 605       2.188  46.179  79.385  1.00 93.05
ATOM   4837  N   ASP A 606       5.544  51.470  80.056  1.00 32.91
ATOM   4838  CA  ASP A 606       6.715  51.510  80.878  1.00 31.82
ATOM   4839  C   ASP A 606       6.549  52.667  81.833  1.00 36.24
ATOM   4840  O   ASP A 606       6.652  52.503  83.045  1.00 35.19
ATOM   4841  CB  ASP A 606       7.983  51.702  80.027  1.00 32.52
ATOM   4842  CG  ASP A 606       8.302  50.525  79.134  1.00 40.01
ATOM   4843  OD1 ASP A 606       7.934  49.378  79.344  1.00 40.49
ATOM   4844  OD2 ASP A 606       9.038  50.869  78.111  1.00 41.73
ATOM   4845  N   LEU A 607       6.240  53.833  81.266  1.00 34.45
ATOM   4846  CA  LEU A 607       6.152  54.972  82.185  1.00 36.03
ATOM   4847  C   LEU A 607       4.814  55.018  82.968  1.00 42.35
ATOM   4848  O   LEU A 607       4.600  55.872  83.824  1.00 41.57
ATOM   4849  CB  LEU A 607       6.321  56.250  81.364  1.00 36.90
ATOM   4850  CG  LEU A 607       7.779  56.490  80.974  1.00 38.75
ATOM   4851  CD1 LEU A 607       7.954  57.746  80.132  1.00 34.34
ATOM   4852  CD2 LEU A 607       8.695  56.653  82.183  1.00 41.97
ATOM   4853  N   LYS A 608       3.895  54.062  82.586  1.00 45.01
ATOM   4854  CA  LYS A 608       2.576  53.874  83.264  1.00 46.99
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ATOM   4855  C   LYS A 608       1.625  55.088  83.181  1.00 51.31
ATOM   4856  O   LYS A 608       0.988  55.467  84.151  1.00 51.35
ATOM   4857  CB  LYS A 608       2.813  53.510  84.750  1.00 50.83
ATOM   4858  CG  LYS A 608       3.331  52.093  84.949  1.00 63.57
ATOM   4859  CD  LYS A 608       4.405  52.019  86.031  1.00 77.03
ATOM   4860  CE  LYS A 608       5.341  50.825  85.858  1.00 96.40
ATOM   4861  NZ  LYS A 608       6.034  50.554  87.117  1.00100.00
ATOM   4862  N   VAL A 609       1.560  55.724  81.991  1.00 50.28
ATOM   4863  CA  VAL A 609       0.688  56.901  81.852  1.00 50.89
ATOM   4864  C   VAL A 609      -0.494  56.660  80.897  1.00 60.23
ATOM   4865  O   VAL A 609      -1.640  56.952  81.194  1.00 63.02
ATOM   4866  CB  VAL A 609       1.533  58.091  81.364  1.00 54.72
ATOM   4867  CG1 VAL A 609       1.996  58.926  82.551  1.00 54.87
ATOM   4868  CG2 VAL A 609       2.744  57.607  80.605  1.00 54.46
ATOM   4869  N   ASP A 610      -0.177  56.152  79.687  1.00 58.84
ATOM   4870  CA  ASP A 610      -1.238  55.949  78.699  1.00 99.84
ATOM   4871  C   ASP A 610      -2.062  54.695  79.001  1.00100.00
ATOM   4872  O   ASP A 610      -3.247  54.615  78.711  1.00 69.75
ATOM   4873  CB  ASP A 610      -0.594  55.818  77.316  1.00100.00
ATOM   4874  CG  ASP A 610      -0.637  57.161  76.610  1.00 92.61
ATOM   4875  OD1 ASP A 610      -1.449  57.999  77.018  1.00 90.49
ATOM   4876  OD2 ASP A 610       0.134  57.355  75.670  1.00 89.29
ATOM   4877 ZN2+ ZN  Z   1      17.003  38.803  64.180  1.00 28.37
ATOM   4878 YB3+ YB  Y   1      43.011  51.068  98.864  1.00 34.70
ATOM   4879 YB3+ YB  Y   2     -13.786  56.771  52.040  0.50 57.25
ATOM   4880 YB3+ YB  Y   3     -10.537  57.860  52.381  0.50 36.57
ATOM   4881  CG  IMD I   1      26.249  42.039  80.754  1.00 28.44
ATOM   4882  ND1 IMD I   1      26.057  42.254  79.400  1.00 28.35
ATOM   4883  CD2 IMD I   1      27.562  41.726  80.902  1.00 17.99
ATOM   4884  CE1 IMD I   1      27.201  42.063  78.760  1.00 29.77
ATOM   4885  NE2 IMD I   1      28.130  41.745  79.647  1.00 35.02
ATOM   4886  CB  ACE C   1      13.616  12.333  68.475  1.00 59.33
ATOM   4887  CG  ACE C   1      12.871  13.331  69.306  1.00 42.98
ATOM   4888  OD1 ACE C   1      12.958  14.536  69.146  1.00 39.66
ATOM   4889  OD2 ACE C   1      12.142  12.759  70.236  1.00 47.21
ATOM   4890  C6  INH V   1       7.422  38.514  70.154  1.00 38.70
ATOM   4891  C5  INH V   1       7.571  39.820  69.689  1.00 37.05
ATOM   4892  C4  INH V   1       7.901  40.062  68.354  1.00 31.41
ATOM   4893  C3  INH V   1       8.091  38.967  67.505  1.00 35.48
ATOM   4894  C2  INH V   1       7.944  37.650  67.949  1.00 31.90
ATOM   4895  C1  INH V   1       7.611  37.434  69.286  1.00 36.93
ATOM   4896  C7  INH V   1       8.071  41.463  67.833  1.00 32.28
ATOM   4897  O1  INH V   1       8.288  41.443  66.485  1.00 37.06
ATOM   4898  C8  INH V   1       9.584  41.740  66.129  1.00 32.34
ATOM   4899  C9  INH V   1       9.825  42.911  65.416  1.00 31.03
ATOM   4900  C10 INH V   1      11.127  43.216  65.023  1.00 33.64
ATOM   4901  C11 INH V   1      12.194  42.381  65.339  1.00 31.88
ATOM   4902  C12 INH V   1      11.928  41.198  66.028  1.00 31.07
ATOM   4903  C13 INH V   1      10.630  40.858  66.412  1.00 28.70
ATOM   4904  C14 INH V   1      13.587  42.710  64.882  1.00 32.51
ATOM   4905  C15 INH V   1      14.260  41.560  64.121  1.00 34.69
ATOM   4906  C16 INH V   1      15.683  41.849  63.754  1.00 28.88
ATOM   4907  S1  INH V   1      16.605  40.755  64.790  1.00 29.16
ATOM   4908  N1  INH V   1      13.497  40.805  63.099  1.00 30.69
ATOM   4909  O   HOH W   1      44.463  49.888  77.523  1.00 46.91
ATOM   4910  O   HOH W   2      13.469  27.803  78.018  1.00 20.07
ATOM   4911  O   HOH W   3       4.225  69.721  58.393  1.00 27.76
ATOM   4912  O   HOH W   4      15.603  28.826  61.823  1.00 22.81
ATOM   4913  O   HOH W   5      22.862  26.624  42.874  1.00 53.05
ATOM   4914  O   HOH W   6       8.423  46.452  57.584  1.00 32.22
ATOM   4915  O   HOH W   7      17.904  46.550  68.524  1.00 31.91
ATOM   4916  O   HOH W   8      22.979  45.895  83.716  1.00 39.37
ATOM   4917  O   HOH W   9      17.707  39.158  55.643  1.00 25.27
ATOM   4918  O   HOH W  10      12.439  36.303  59.209  1.00 31.46
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ATOM   4919  O   HOH W  11      17.367  62.730  50.320  1.00 37.74
ATOM   4920  O   HOH W  12      42.823  52.642  90.552  1.00 53.80
ATOM   4921  O   HOH W  13      34.337  45.508  97.419  1.00 57.99
ATOM   4922  O   HOH W  14       6.726  27.119  48.459  1.00 62.29
ATOM   4923  O   HOH W  15      -0.093  30.159  71.746  1.00 29.96
ATOM   4924  O   HOH W  16     -19.673  44.016  58.682  1.00 58.64
ATOM   4925  O   HOH W  17      16.563  26.790  80.837  1.00 38.62
ATOM   4926  O   HOH W  18      10.281  35.677  88.518  1.00 26.01
ATOM   4927  O   HOH W  19      20.973  35.691  44.774  1.00 49.50
ATOM   4928  O   HOH W  20       0.996  19.571  53.713  1.00 67.39
ATOM   4929  O   HOH W  21      20.424  37.014  85.845  1.00 39.54
ATOM   4930  O   HOH W  22      -2.498  35.905  53.781  1.00 51.70
ATOM   4931  O   HOH W  23      39.807  49.718  92.595  1.00 37.39
ATOM   4932  O   HOH W  24      16.431  58.267  93.127  1.00 47.45
ATOM   4933  O   HOH W  25       6.935  45.104  66.012  1.00 18.12
ATOM   4934  O   HOH W  26      40.479  54.713 100.253  1.00 28.72
ATOM   4935  O   HOH W  27      22.369  40.324  67.919  1.00 46.36
ATOM   4936  O   HOH W  28      37.289  49.457  68.016  1.00 61.37
ATOM   4937  O   HOH W  29       2.611  35.015  55.709  1.00 24.45
ATOM   4938  O   HOH W  30      41.088  62.590  98.644  1.00 65.38
ATOM   4939  O   HOH W  31      17.369  55.024  87.465  1.00 24.22
ATOM   4940  O   HOH W  32      25.433  20.198  55.692  1.00 44.61
ATOM   4941  O   HOH W  33       3.890  42.770  66.651  1.00 22.34
ATOM   4942  O   HOH W  34       3.934  63.391  62.592  1.00 60.69
ATOM   4943  O   HOH W  35      22.280  41.610  86.289  1.00 74.20
ATOM   4944  O   HOH W  36      22.631  46.401  90.078  1.00 47.44
ATOM   4945  O   HOH W  37      33.442  20.227  64.569  1.00 55.41
ATOM   4946  O   HOH W  38      39.834  28.974  75.602  1.00 41.72
ATOM   4947  O   HOH W  39      35.232  47.140  54.186  1.00 37.08
ATOM   4948  O   HOH W  40      36.003  57.784  57.893  1.00 43.05
ATOM   4949  O   HOH W  41      37.216  27.438  74.564  1.00 50.79
ATOM   4950  O   HOH W  42      17.770  67.012  77.183  1.00 45.78
ATOM   4951  O   HOH W  43       5.341  31.286  78.127  1.00 25.34
ATOM   4952  O   HOH W  44      33.535  32.503  52.063  1.00 56.13
ATOM   4953  O   HOH W  45      25.477  33.146  44.610  1.00 65.43
ATOM   4954  O   HOH W  46      16.235  37.438  52.628  1.00 32.10
ATOM   4955  O   HOH W  47      28.791  14.101  63.316  1.00 46.67
ATOM   4956  O   HOH W  48      10.230  24.992  86.967  1.00 38.63
ATOM   4957  O   HOH W  49      30.821  38.856  79.630  1.00 40.44
ATOM   4958  O   HOH W  50      12.621  37.226  62.944  1.00 26.70
ATOM   4959  O   HOH W  51      27.987  30.609  66.612  1.00 33.55
ATOM   4960  O   HOH W  52      34.459  28.696  64.242  1.00 51.01
ATOM   4961  O   HOH W  53      34.969  62.270  91.179  1.00 68.20
ATOM   4962  O   HOH W  54      33.631  30.717  62.396  1.00 41.64
ATOM   4963  O   HOH W  55      43.987  48.530  91.269  1.00 50.99
ATOM   4964  O   HOH W  56      23.412  28.584  85.186  1.00 69.23
ATOM   4965  O   HOH W  57      39.834  28.057  72.257  1.00 81.00
ATOM   4966  O   HOH W  58       2.892  25.685  69.907  1.00 38.96
ATOM   4967  O   HOH W  59      10.284  47.120  72.671  1.00 40.28
ATOM   4968  O   HOH W  60      32.645  39.037  76.746  1.00 21.71
ATOM   4969  O   HOH W  61      43.535  48.019  95.228  1.00 37.69
ATOM   4970  O   HOH W  62      11.991  51.053  43.479  1.00 41.05
ATOM   4971  O   HOH W  63      18.329  56.527  89.388  1.00 28.51
ATOM   4972  O   HOH W  64      16.555   9.309  68.875  1.00 89.05
ATOM   4973  O   HOH W  65      23.741  44.759  73.150  1.00 38.43
ATOM   4974  O   HOH W  66      19.093  53.805  41.239  1.00 55.25
ATOM   4975  O   HOH W  67      31.750  60.369  56.933  1.00 92.26
ATOM   4976  O   HOH W  68      24.836  68.428  80.926  1.00 59.25
ATOM   4977  O   HOH W  69     -21.014  19.446  48.342  1.00 52.24
ATOM   4978  O   HOH W  70      11.318  68.028  86.566  1.00 77.81
ATOM   4979  O   HOH W  71       5.312  60.076  63.511  1.00 36.83
ATOM   4980  O   HOH W  72       7.689  20.219  84.680  1.00 32.24
ATOM   4981  O   HOH W  73      34.988  44.708  64.746  1.00 40.73
ATOM   4982  O   HOH W  74      10.614  49.644  41.337  1.00 38.90
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ATOM   4983  O   HOH W  75      19.349  42.973  64.739  1.00 54.53
ATOM   4984  O   HOH W  76      35.916  30.862  80.753  1.00 55.38
ATOM   4985  O   HOH W  77       9.666  26.046  46.603  1.00 40.09
ATOM   4986  O   HOH W  78     -10.171  46.751  60.237  1.00 29.78
ATOM   4987  O   HOH W  79      46.751  58.883  86.875  1.00 35.92
ATOM   4988  O   HOH W  80      19.320  32.528  51.000  1.00 33.36
ATOM   4989  O   HOH W  81      28.815  39.568  66.176  1.00 59.19
ATOM   4990  O   HOH W  82      38.207  35.773  73.585  1.00 17.81
ATOM   4991  O   HOH W  83      23.802  33.925  75.175  1.00 25.19
ATOM   4992  O   HOH W  84      42.241  51.290  99.896  1.00 15.88
ATOM   4993  O   HOH W  85       3.751  36.678  58.842  1.00 24.97
ATOM   4994  O   HOH W  86      -7.009  40.341  62.580  1.00 25.39
ATOM   4995  O   HOH W  87      11.735  58.910  68.155  1.00 39.70
ATOM   4996  O   HOH W  88      13.986  52.835  42.224  1.00 50.91
ATOM   4997  O   HOH W  89       1.452  46.541  69.459  1.00 35.03
ATOM   4998  O   HOH W  90      -1.938  55.310  56.971  1.00 28.10
ATOM   4999  O   HOH W  91      13.801  66.947  52.600  1.00 38.65
ATOM   5000  O   HOH W  92      21.594  47.218  79.203  1.00 30.31
ATOM   5001  O   HOH W  93      10.639  58.632  90.827  1.00 43.78
ATOM   5002  O   HOH W  94      33.335  53.550  68.086  1.00 37.04
ATOM   5003  O   HOH W  95      -1.984  28.738  60.212  1.00 31.56
ATOM   5004  O   HOH W  96      -4.958  51.055  59.250  1.00 34.00
ATOM   5005  O   HOH W  97      17.610  39.701  51.503  1.00 28.27
ATOM   5006  O   HOH W  98      10.686  54.166  67.565  1.00 37.68
ATOM   5007  O   HOH W  99      20.567  43.859  78.621  1.00 41.57
ATOM   5008  O   HOH W 100       7.013  22.332  69.109  1.00 28.72
ATOM   5009  O   HOH W 101      10.097  53.225  78.477  1.00 35.68
ATOM   5010  O   HOH W 102      10.849  31.404  53.014  1.00 32.22
ATOM   5011  O   HOH W 103      42.381  59.035  94.728  1.00 36.00
ATOM   5012  O   HOH W 104      17.234  41.111  54.082  1.00 33.65
ATOM   5013  O   HOH W 105      26.902  62.025  81.989  1.00 34.70
ATOM   5014  O   HOH W 106     -14.313  49.559  56.204  1.00 54.36
ATOM   5015  O   HOH W 107      41.646  57.501 101.015  1.00 68.12
ATOM   5016  O   HOH W 108      26.759  43.000  47.219  1.00 32.69
ATOM   5017  O   HOH W 109      16.624  48.119  46.545  1.00 38.64
ATOM   5018  O   HOH W 110      26.159  32.793  75.230  1.00 24.77
ATOM   5019  O   HOH W 111       2.101  33.468  67.006  1.00 31.50
ATOM   5020  O   HOH W 112      38.114  36.374  87.451  1.00 44.06
ATOM   5021  O   HOH W 113      13.211  29.810  61.356  1.00 33.81
ATOM   5022  O   HOH W 114      -3.064  37.863  40.673  1.00 37.92
ATOM   5023  O   HOH W 115      15.007  47.948  69.488  1.00 28.23
ATOM   5024  O   HOH W 116      27.101  66.633  80.518  1.00 41.24
ATOM   5025  O   HOH W 117      11.870  38.304  43.174  1.00 40.85
ATOM   5026  O   HOH W 118     -13.844  25.597  58.258  1.00 53.75
ATOM   5027  O   HOH W 119       2.929  41.135  59.858  1.00 36.49
ATOM   5028  O   HOH W 120      24.890  45.490  82.167  1.00 41.65
ATOM   5029  O   HOH W 121      36.062  59.335  75.090  1.00 38.82
ATOM   5030  O   HOH W 122     -10.715  32.037  61.699  1.00 78.82
ATOM   5031  O   HOH W 123      -2.646  25.492  60.812  1.00 48.40
ATOM   5032  O   HOH W 124      -8.948  46.831  63.556  1.00 48.06
ATOM   5033  O   HOH W 125     -17.843  39.367  36.020  1.00 35.80
ATOM   5034  O   HOH W 126       2.218  57.766  62.253  1.00 44.61
ATOM   5035  O   HOH W 127      10.736  62.766  64.366  1.00 55.84
ATOM   5036  O   HOH W 128       0.884  35.562  63.963  1.00 44.14
ATOM   5037  O   HOH W 129      19.165  59.557  60.644  1.00 47.82
ATOM   5038  O   HOH W 130       1.546  27.875  68.443  1.00 39.69
ATOM   5039  O   HOH W 131       5.497  26.285  76.668  1.00 44.47
ATOM   5040  O   HOH W 132      14.505  36.538  88.996  1.00 40.00
ATOM   5041  O   HOH W 133       8.534  28.713  88.519  1.00 46.55
ATOM   5042  O   HOH W 134       6.125  45.267  77.959  1.00 45.57
ATOM   5043  O   HOH W 135      26.016  18.543  78.878  1.00 51.65
ATOM   5044  O   HOH W 136      33.880  23.025  70.739  1.00 46.95
ATOM   5045  O   HOH W 137      19.230  26.073  49.998  1.00 51.97
ATOM   5046  O   HOH W 138      41.563  41.085  77.326  1.00 43.14
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ATOM   5047  O   HOH W 139      39.187  63.067  75.380  1.00 56.52
ATOM   5048  O   HOH W 140      26.878  54.491  67.203  1.00 42.14
ATOM   5049  O   HOH W 141      22.988  62.189  74.174  1.00 48.31
ATOM   5050  O   HOH W 142      25.190  62.803  71.067  1.00 67.16
ATOM   5051  O   HOH W 143      18.598  45.126  81.949  1.00 53.80
ATOM   5052  O   HOH W 144      19.782  53.129  90.556  1.00 48.73
ATOM   5053  O   HOH W 145      21.735  48.367  86.454  1.00 40.39
ATOM   5054  O   HOH W 146      25.707  57.012  93.476  1.00 53.61
ATOM   5055  O   HOH W 147      22.832  62.085  93.149  1.00 46.02
ATOM   5056  O   HOH W 148      25.725  67.203  89.990  1.00 75.23
ATOM   5057  O   HOH W 149      10.773  53.653  85.697  1.00 50.65
ATOM   5058  O   HOH W 150       4.221  58.449  86.608  1.00 49.23
ATOM   5059  O   HOH W 151       7.790  72.096  84.410  1.00 51.10
ATOM   5060  O   HOH W 152       2.387  58.282  67.835  1.00 33.29
ATOM   5061  O   HOH W 153       0.921  49.551  69.095  1.00 59.60
ATOM   5062  O   HOH W 154       8.722  45.171  71.561  1.00 46.56
ATOM   5063  O   HOH W 155       6.422  47.947  81.081  1.00 57.56
ATOM   5064  O   HOH W 156      15.936  56.908  55.129  1.00 43.33
ATOM   5065  O   HOH W 157       3.032  19.635  62.453  1.00 80.38
ATOM   5066  O   HOH W 158      -4.228  58.058  47.057  1.00 39.66
ATOM   5067  O   HOH W 159       1.197  41.002  78.942  1.00 57.22
ATOM   5068  O   HOH W 160       1.259  43.651  68.100  1.00 37.94
ATOM   5069  O   HOH W 161      25.799  64.833  56.690  1.00 38.96
ATOM   5070  O   HOH W 162     -11.853  45.054  45.070  1.00 38.38
ATOM   5071  O   HOH W 163      40.159  31.033  78.548  1.00 75.36
ATOM   5072  O   HOH W 164      21.477  20.377  79.349  1.00 35.96
ATOM   5073  O   HOH W 165      26.347  44.558  72.803  1.00 42.21
ATOM   5074  O   HOH W 166      16.446  61.207  59.687  1.00 39.70
ATOM   5075  O   HOH W 167      27.695  64.216  82.410  1.00 44.71
ATOM   5076  O   HOH W 168      -2.998  57.511  34.738  1.00 45.35
ATOM   5077  O   HOH W 169       6.608  51.527  60.826  1.00 39.48
ATOM   5078  O   HOH W 170      31.104  28.934  81.337  1.00 43.19
ATOM   5079  O   HOH W 171      10.135  28.233  45.533  1.00 41.24
ATOM   5080  O   HOH W 172       8.201  43.960  75.322  1.00 37.71
ATOM   5081  O   HOH W 173      13.799  66.601  85.597  1.00 34.74
ATOM   5082  O   HOH W 174      16.664  53.670  65.006  1.00 43.69
ATOM   5083  O   HOH W 175      18.301  47.296  43.793  1.00 45.84
ATOM   5084  O   HOH W 176      11.717  61.868  52.648  1.00 34.93
ATOM   5085  O   HOH W 177      29.516  23.822  76.838  1.00 51.50
ATOM   5086  O   HOH W 178      39.940  60.509  78.535  1.00 46.33
ATOM   5087  O   HOH W 179      -1.803  44.974  37.278  1.00 52.56
ATOM   5088  O   HOH W 180       7.343  47.305  65.468  1.00 47.27
ATOM   5089  O   HOH W 181      17.912  15.338  81.793  1.00 50.08
ATOM   5090  O   HOH W 182      -4.631  55.917  82.183  1.00 65.36
ATOM   5091  O   HOH W 183      32.973  42.656  86.667  1.00 43.97
ATOM   5092  O   HOH W 184      -1.834  36.784  71.040  1.00 45.10
ATOM   5093  O   HOH W 185      -4.519  34.633  71.838  1.00 43.99
ATOM   5094  O   HOH W 186       4.518  68.554  71.661  1.00 46.99
ATOM   5095  O   HOH W 187       2.774  37.503  61.490  1.00 45.81
ATOM   5096  O   HOH W 188      31.770  43.526  51.410  1.00 58.02
ATOM   5097  O   HOH W 189       5.471  43.861  38.891  1.00 49.43
ATOM   5098  O   HOH W 190      11.934  58.219  70.811  1.00 49.96
ATOM   5099  O   HOH W 191      33.112  26.203  70.484  1.00 60.03
ATOM   5100  O   HOH W 192      30.914  43.017  70.613  1.00 73.23
ATOM   5101  O   HOH W 193       0.400  39.300  39.714  1.00 65.37
ATOM   5102  O   HOH W 194      48.247  56.159  86.370  1.00 60.09
ATOM   5103  O   HOH W 195      12.359  59.992  62.698  1.00 53.57
ATOM   5104  O   HOH W 196      11.149  17.504  78.264  1.00 54.43
ATOM   5105  O   HOH W 197      -4.284  31.953  60.991  1.00 47.12
ATOM   5106  O   HOH W 198      29.888  35.624  82.772  1.00 52.16
ATOM   5107  O   HOH W 199      14.388  39.115  89.656  1.00 47.93
ATOM   5108  O   HOH W 200      -8.529  51.475  47.745  1.00 61.00
ATOM   5109  O   HOH W 201     -15.572  53.338  52.008  1.00 72.42
ATOM   5110  O   HOH W 202      24.319  38.590  87.128  1.00 50.03
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ATOM   5111  O   HOH W 203      25.366  70.670  82.839  1.00 49.01
ATOM   5112  O   HOH W 204      18.531  27.749  86.236  1.00 48.64
ATOM   5113  O   HOH W 205      21.694  20.030  81.796  1.00 49.04
ATOM   5114  O   HOH W 206      23.953  47.993  67.580  1.00 40.39
ATOM   5115  O   HOH W 207      22.012  40.217  90.228  1.00 42.29
ATOM   5116  O   HOH W 208      16.197  45.094  43.427  1.00 48.00
ATOM   5117  O   HOH W 209      21.019  68.985  84.382  1.00 56.50
ATOM   5118  O   HOH W 210      -7.134  33.015  71.591  1.00 56.31
ATOM   5119  O   HOH W 211      40.843  44.050  89.284  1.00 43.07
ATOM   5120  O   HOH W 212      20.374  14.856  56.642  1.00 50.07
ATOM   5121  O   HOH W 213      12.723  46.277  73.748  1.00 59.15
ATOM   5122  O   HOH W 214       8.956  43.704  58.706  1.00 45.56
ATOM   5123  O   HOH W 215      -2.433  36.012  80.232  1.00 54.12
ATOM   5124  O   HOH W 216       5.257  25.271  55.914  1.00 53.23
ATOM   5125  O   HOH W 217      13.354  64.403  53.862  1.00 47.27
ATOM   5126  O   HOH W 218      30.477  42.517  67.472  1.00 48.17
ATOM   5127  O   HOH W 219      14.139  47.479  76.123  1.00 79.04
ATOM   5128  O   HOH W 220       0.829  29.563  50.769  1.00 48.10
ATOM   5129  O   HOH W 221      32.979  51.667  96.624  1.00 51.30
ATOM   5130  O   HOH W 222      14.677  45.948  71.756  1.00 52.31
ATOM   5131  O   HOH W 223      33.890  24.505  58.094  1.00 43.65
ATOM   5132  O   HOH W 224      17.853   9.519  65.560  1.00 55.94
ATOM   5133  O   HOH W 225      37.794  31.473  62.305  1.00 50.38
ATOM   5134  O   HOH W 226      29.206  50.335  62.673  1.00 45.43
ATOM   5135  O   HOH W 227       4.932  48.808  63.354  1.00 42.45
ATOM   5136  O   HOH W 228      18.933  59.070  55.899  1.00 50.29
ATOM   5137  O   HOH W 229      13.849  18.833  83.641  1.00 55.89
ATOM   5138  O   HOH W 230      25.919  46.022  68.076  1.00 35.63
ATOM   5139  O   HOH W 231      27.565  65.098  75.153  1.00 73.11
ATOM   5140  O   HOH W 232      27.128  39.012  68.497  1.00 40.77
ATOM   5141  O   HOH W 233      40.706  52.468  74.641  1.00 51.60
ATOM   5142  O   HOH W 234      21.689  65.312  58.080  1.00 66.72
ATOM   5143  O   HOH W 235       9.121  17.615  59.271  1.00 51.98
ATOM   5144  O   HOH W 236      17.931  36.565  88.091  1.00 54.77
ATOM   5145  O   HOH W 237      33.843  36.707  52.576  1.00 61.60
ATOM   5146  O   HOH W 238      -3.693  50.074  63.986  1.00 43.64
ATOM   5147  O   HOH W 239      44.272  44.279  81.461  1.00 69.21
ATOM   5148  O   HOH W 240       2.092  28.868  52.894  1.00 54.01
ATOM   5149  O   HOH W 241       8.309  33.518  71.442  1.00 68.05
ATOM   5150  O   HOH W 242       1.051  31.947  69.204  1.00 52.88
ATOM   5151  O   HOH W 243      44.255  51.162  96.650  1.00 20.00
ATOM   5152  O   HOH W 244      16.173  45.408  46.636  1.00 20.00
ATOM   5153  O   HOH W 245      41.130  50.734  97.991  1.00 20.00
ATOM   5154  O   HOH W 246      36.912  36.263  75.911  1.00 20.00
ATOM   5155  O   HOH W 247     -17.107  27.146  54.728  1.00 20.00
ATOM   5156  O   HOH W 248      24.078  46.307  79.123  1.00 20.00
ATOM   5157  O   HOH W 249     -12.250  47.964  61.593  1.00 20.00
ATOM   5158  O   HOH W 250      35.804  51.343  51.682  1.00 20.00
ATOM   5159  O   HOH W 251      25.537  59.940  69.750  1.00 20.00
ATOM   5160  O   HOH W 252       0.539  55.427  62.088  1.00 20.00
END
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Table 11: Structure coordinates of LTA_4 hydrolase-hydroxamic acid complex

CRYST	67.770	132.470	83.700	90.00	90.00	90.00	P21212			
	Atom	res.	Chain	No.	x	y	z	occ	B-factor	
ATOM	1	N	PRO	A	1	-2.215	16.942	65.912	1.00	98.67
ATOM	2	CA	PRO	A	1	-2.492	18.109	66.739	1.00	96.57
ATOM	3	C	PRO	A	1	-1.985	19.345	66.046	1.00	90.92
ATOM	4	O	PRO	A	1	-0.791	19.459	65.732	1.00	87.94
ATOM	5	CB	PRO	A	1	-1.747	17.907	68.073	1.00	98.18
ATOM	6	CG	PRO	A	1	-1.000	16.573	67.973	1.00	100.00
ATOM	7	CD	PRO	A	1	-1.249	16.011	66.573	1.00	97.96
ATOM	8	N	GLU	A	2	-2.895	20.262	65.790	1.00	83.08
ATOM	9	CA	GLU	A	2	-2.492	21.448	65.116	1.00	81.25
ATOM	10	C	GLU	A	2	-1.948	22.471	66.074	1.00	80.21
ATOM	11	O	GLU	A	2	-2.444	22.625	67.189	1.00	80.90
ATOM	12	CB	GLU	A	2	-3.549	22.038	64.168	1.00	82.10
ATOM	13	CG	GLU	A	2	-2.895	22.838	63.023	1.00	92.94
ATOM	14	CD	GLU	A	2	-1.451	22.466	62.778	1.00	95.77
ATOM	15	OE1	GLU	A	2	-0.520	23.237	62.917	1.00	94.64
ATOM	16	OE2	GLU	A	2	-1.307	21.231	62.383	1.00	74.00
ATOM	17	N	ILE	A	3	-0.898	23.141	65.624	1.00	69.91
ATOM	18	CA	ILE	A	3	-0.300	24.192	66.393	1.00	66.19
ATOM	19	C	ILE	A	3	-1.124	25.431	66.042	1.00	60.35
ATOM	20	O	ILE	A	3	-1.438	25.713	64.866	1.00	60.57
ATOM	21	CB	ILE	A	3	1.215	24.316	66.167	1.00	69.46
ATOM	22	CG1	ILE	A	3	1.919	23.117	66.809	1.00	69.22
ATOM	23	CG2	ILE	A	3	1.772	25.604	66.769	1.00	70.57
ATOM	24	CD1	ILE	A	3	2.674	23.468	68.090	1.00	67.16
ATOM	25	N	VAL	A	4	-1.546	26.135	67.071	1.00	47.12
ATOM	26	CA	VAL	A	4	-2.372	27.296	66.856	1.00	43.66
ATOM	27	C	VAL	A	4	-1.621	28.601	66.943	1.00	36.61
ATOM	28	O	VAL	A	4	-0.804	28.799	67.843	1.00	33.97
ATOM	29	CB	VAL	A	4	-3.580	27.282	67.811	1.00	46.37
ATOM	30	CG1	VAL	A	4	-4.296	28.636	67.855	1.00	44.31
ATOM	31	CG2	VAL	A	4	-4.552	26.203	67.353	1.00	45.89
ATOM	32	N	ASP	A	5	-1.920	29.496	65.997	1.00	25.42
ATOM	33	CA	ASP	A	5	-1.311	30.793	66.050	1.00	22.70
ATOM	34	C	ASP	A	5	-2.262	31.630	66.874	1.00	26.31
ATOM	35	O	ASP	A	5	-3.285	32.069	66.397	1.00	25.00
ATOM	36	CB	ASP	A	5	-1.083	31.454	64.687	1.00	23.91
ATOM	37	CG	ASP	A	5	-0.248	32.685	64.868	1.00	28.48
ATOM	38	OD1	ASP	A	5	-0.199	33.272	65.935	1.00	27.12
ATOM	39	OD2	ASP	A	5	0.383	33.068	63.776	1.00	23.01
ATOM	40	N	THR	A	6	-1.942	31.792	68.144	1.00	25.96
ATOM	41	CA	THR	A	6	-2.799	32.525	69.029	1.00	23.74
ATOM	42	C	THR	A	6	-2.689	34.005	68.859	1.00	27.92
ATOM	43	O	THR	A	6	-3.169	34.763	69.701	1.00	31.80
ATOM	44	CB	THR	A	6	-2.629	32.111	70.483	1.00	25.94
ATOM	45	OG1	THR	A	6	-1.315	32.422	70.891	1.00	40.88
ATOM	46	CG2	THR	A	6	-2.867	30.609	70.627	1.00	29.05
ATOM	47	N	CYS	A	7	-2.068	34.442	67.779	1.00	23.72
ATOM	48	CA	CYS	A	7	-1.967	35.893	67.566	1.00	24.38
ATOM	49	C	CYS	A	7	-2.737	36.321	66.325	1.00	28.42
ATOM	50	O	CYS	A	7	-2.766	37.475	65.965	1.00	27.59
ATOM	51	CB	CYS	A	7	-0.516	36.435	67.449	1.00	23.86
ATOM	52	SG	CYS	A	7	0.510	36.080	68.886	1.00	29.33
ATOM	53	N	SER	A	8	-3.324	35.370	65.638	1.00	27.23
ATOM	54	CA	SER	A	8	-4.020	35.686	64.419	1.00	25.64
ATOM	55	C	SER	A	8	-5.479	35.340	64.538	1.00	25.31
ATOM	56	O	SER	A	8	-5.867	34.421	65.273	1.00	22.83
ATOM	57	CB	SER	A	8	-3.368	34.908	63.278	1.00	26.35
ATOM	58	OG	SER	A	8	-4.090	35.105	62.093	1.00	29.02

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ATOM     59  N   LEU A   9      -6.298  36.071  63.799  1.00 20.95
ATOM     60  CA  LEU A   9      -7.720  35.750  63.869  1.00 20.81
ATOM     61  C   LEU A   9      -8.188  35.158  62.554  1.00 24.77
ATOM     62  O   LEU A   9      -9.364  34.872  62.381  1.00 28.22
ATOM     63  CB  LEU A   9      -8.573  36.991  64.170  1.00 20.29
ATOM     64  CG  LEU A   9      -8.171  37.744  65.434  1.00 21.06
ATOM     65  CD1 LEU A   9      -8.875  39.088  65.438  1.00 22.40
ATOM     66  CD2 LEU A   9      -8.576  36.926  66.656  1.00 15.77
ATOM     67  N   ALA A  10      -7.240  35.040  61.630  1.00 22.60
ATOM     68  CA  ALA A  10      -7.461  34.528  60.294  1.00 17.85
ATOM     69  C   ALA A  10      -7.633  33.039  60.254  1.00 23.94
ATOM     70  O   ALA A  10      -7.281  32.298  61.178  1.00 22.85
ATOM     71  CB  ALA A  10      -6.291  34.891  59.397  1.00 15.48
ATOM     72  N   SER A  11      -8.170  32.590  59.129  1.00 25.50
ATOM     73  CA  SER A  11      -8.306  31.156  58.921  1.00 27.59
ATOM     74  C   SER A  11      -6.887  30.575  58.992  1.00 25.13
ATOM     75  O   SER A  11      -5.938  31.112  58.437  1.00 26.43
ATOM     76  CB  SER A  11      -8.917  30.833  57.544  1.00 29.01
ATOM     77  OG  SER A  11     -10.241  31.338  57.445  1.00 28.50
ATOM     78  N   PRO A  12      -6.740  29.460  59.662  1.00 23.36
ATOM     79  CA  PRO A  12      -5.445  28.827  59.798  1.00 20.96
ATOM     80  C   PRO A  12      -4.949  28.121  58.533  1.00 34.02
ATOM     81  O   PRO A  12      -5.743  27.764  57.646  1.00 34.95
ATOM     82  CB  PRO A  12      -5.590  27.834  60.952  1.00 22.26
ATOM     83  CG  PRO A  12      -7.080  27.652  61.201  1.00 29.49
ATOM     84  CD  PRO A  12      -7.769  28.845  60.542  1.00 25.95
ATOM     85  N   ALA A  13      -3.615  27.927  58.479  1.00 29.46
ATOM     86  CA  ALA A  13      -2.922  27.276  57.385  1.00 25.81
ATOM     87  C   ALA A  13      -3.531  25.912  57.109  1.00 27.87
ATOM     88  O   ALA A  13      -3.320  25.321  56.072  1.00 30.10
ATOM     89  CB  ALA A  13      -1.458  27.115  57.746  1.00 25.60
ATOM     90  N   SER A  14      -4.288  25.389  58.038  1.00 20.61
ATOM     91  CA  SER A  14      -4.876  24.090  57.814  1.00 24.37
ATOM     92  C   SER A  14      -6.230  24.183  57.108  1.00 32.80
ATOM     93  O   SER A  14      -6.831  23.183  56.733  1.00 35.15
ATOM     94  CB  SER A  14      -5.031  23.366  59.137  1.00 29.06
ATOM     95  OG  SER A  14      -5.775  24.180  60.037  1.00 31.14
ATOM     96  N   VAL A  15      -6.721  25.392  56.944  1.00 24.99
ATOM     97  CA  VAL A  15      -7.984  25.582  56.278  1.00 25.26
ATOM     98  C   VAL A  15      -7.774  26.148  54.865  1.00 27.71
ATOM     99  O   VAL A  15      -8.348  25.688  53.886  1.00 27.54
ATOM    100  CB  VAL A  15      -8.876  26.466  57.127  1.00 29.72
ATOM    101  CG1 VAL A  15      -9.999  27.045  56.271  1.00 30.81
ATOM    102  CG2 VAL A  15      -9.411  25.656  58.298  1.00 27.89
ATOM    103  N   CYS A  16      -6.921  27.144  54.764  1.00 20.14
ATOM    104  CA  CYS A  16      -6.594  27.769  53.503  1.00 24.17
ATOM    105  C   CYS A  16      -5.265  28.490  53.629  1.00 26.96
ATOM    106  O   CYS A  16      -4.834  28.793  54.744  1.00 28.25
ATOM    107  CB  CYS A  16      -7.703  28.694  52.944  1.00 28.08
ATOM    108  SG  CYS A  16      -7.881  30.231  53.880  1.00 34.58
ATOM    109  N   ARG A  17      -4.622  28.749  52.496  1.00 20.39
ATOM    110  CA  ARG A  17      -3.344  29.409  52.520  1.00 22.15
ATOM    111  C   ARG A  17      -3.186  30.347  51.365  1.00 26.96
ATOM    112  O   ARG A  17      -3.415  30.002  50.202  1.00 23.44
ATOM    113  CB  ARG A  17      -2.147  28.451  52.443  1.00 26.39
ATOM    114  CG  ARG A  17      -2.231  27.181  53.264  1.00 24.30
ATOM    115  CD  ARG A  17      -1.416  26.086  52.599  1.00 28.56
ATOM    116  NE  ARG A  17      -0.772  25.134  53.510  1.00 51.45
ATOM    117  CZ  ARG A  17      -1.392  24.225  54.263  1.00 69.75
ATOM    118  NH1 ARG A  17      -2.693  24.086  54.287  1.00 72.82
ATOM    119  NH2 ARG A  17      -0.694  23.418  55.032  1.00 48.88
ATOM    120  N   THR A  18      -2.723  31.532  51.700  1.00 21.89
ATOM    121  CA  THR A  18      -2.478  32.539  50.713  1.00 20.46
ATOM    122  C   THR A  18      -1.200  32.197  50.007  1.00 27.00
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ATOM    123  O   THR A  18      -0.207  31.923  50.662  1.00 26.28
ATOM    124  CB  THR A  18      -2.370  33.949  51.337  1.00 21.64
ATOM    125  OG1 THR A  18      -3.539  34.262  52.076  1.00 25.03
ATOM    126  CG2 THR A  18      -2.164  34.944  50.211  1.00 21.73
ATOM    127  N   LYS A  19      -1.235  32.203  48.677  1.00 22.54
ATOM    128  CA  LYS A  19      -0.091  31.871  47.864  1.00 21.16
ATOM    129  C   LYS A  19       0.538  33.063  47.238  1.00 23.51
ATOM    130  O   LYS A  19       1.732  33.098  46.968  1.00 23.00
ATOM    131  CB  LYS A  19      -0.557  30.976  46.740  1.00 24.60
ATOM    132  CG  LYS A  19      -1.311  29.775  47.257  1.00 34.24
ATOM    133  CD  LYS A  19      -0.944  29.419  48.688  1.00 65.32
ATOM    134  CE  LYS A  19       0.230  28.442  48.793  1.00 75.40
ATOM    135  NZ  LYS A  19       1.183  28.796  49.864  1.00 66.99
ATOM    136  N   HIS A  20      -0.280  34.053  46.967  1.00 22.30
ATOM    137  CA  HIS A  20       0.201  35.250  46.309  1.00 20.94
ATOM    138  C   HIS A  20      -0.588  36.484  46.673  1.00 23.90
ATOM    139  O   HIS A  20      -1.779  36.414  47.022  1.00 23.31
ATOM    140  CB  HIS A  20       0.054  35.095  44.801  1.00 19.15
ATOM    141  CG  HIS A  20       0.888  36.085  44.129  1.00 20.96
ATOM    142  ND1 HIS A  20       2.258  36.003  44.163  1.00 22.60
ATOM    143  CD2 HIS A  20       0.538  37.198  43.437  1.00 24.10
ATOM    144  CE1 HIS A  20       2.725  37.040  43.496  1.00 23.71
ATOM    145  NE2 HIS A  20       1.708  37.784  43.025  1.00 24.51
ATOM    146  N   LEU A  21       0.105  37.600  46.594  1.00 26.18
ATOM    147  CA  LEU A  21      -0.484  38.893  46.871  1.00 27.24
ATOM    148  C   LEU A  21      -0.104  39.856  45.805  1.00 27.01
ATOM    149  O   LEU A  21       1.076  40.014  45.522  1.00 27.97
ATOM    150  CB  LEU A  21      -0.064  39.501  48.215  1.00 28.80
ATOM    151  CG  LEU A  21      -0.335  41.006  48.296  1.00 34.13
ATOM    152  CD1 LEU A  21      -1.834  41.309  48.440  1.00 36.26
ATOM    153  CD2 LEU A  21       0.393  41.578  49.504  1.00 36.24
ATOM    154  N   HIS A  22      -1.110  40.475  45.203  1.00 28.25
ATOM    155  CA  HIS A  22      -0.852  41.482  44.186  1.00 30.03
ATOM    156  C   HIS A  22      -1.272  42.800  44.795  1.00 31.36
ATOM    157  O   HIS A  22      -2.435  42.993  45.127  1.00 30.57
ATOM    158  CB  HIS A  22      -1.560  41.291  42.844  1.00 31.66
ATOM    159  CG  HIS A  22      -1.060  42.347  41.913  1.00 34.36
ATOM    160  ND1 HIS A  22      -1.913  43.134  41.187  1.00 37.39
ATOM    161  CD2 HIS A  22       0.208  42.734  41.635  1.00 37.45
ATOM    162  CE1 HIS A  22      -1.155  43.968  40.481  1.00 38.02
ATOM    163  NE2 HIS A  22       0.132  43.757  40.730  1.00 37.95
ATOM    164  N   LEU A  23      -0.315  43.668  45.000  1.00 31.07
ATOM    165  CA  LEU A  23      -0.593  44.939  45.637  1.00 31.63
ATOM    166  C   LEU A  23      -0.469  46.144  44.705  1.00 32.72
ATOM    167  O   LEU A  23       0.563  46.431  44.093  1.00 34.74
ATOM    168  CB  LEU A  23       0.299  45.093  46.894  1.00 31.20
ATOM    169  CG  LEU A  23      -0.320  45.795  48.126  1.00 34.26
ATOM    170  CD1 LEU A  23       0.543  46.966  48.510  1.00 32.64
ATOM    171  CD2 LEU A  23      -1.759  46.263  47.957  1.00 34.32
ATOM    172  N   ARG A  24      -1.576  46.840  44.623  1.00 28.33
ATOM    173  CA  ARG A  24      -1.681  48.040  43.837  1.00 30.28
ATOM    174  C   ARG A  24      -2.162  49.119  44.794  1.00 35.16
ATOM    175  O   ARG A  24      -3.251  49.005  45.349  1.00 35.74
ATOM    176  CB  ARG A  24      -2.651  47.860  42.689  1.00 32.69
ATOM    177  CG  ARG A  24      -1.962  47.363  41.423  1.00 55.58
ATOM    178  CD  ARG A  24      -2.732  47.698  40.144  1.00 67.44
ATOM    179  NE  ARG A  24      -3.993  46.971  40.030  1.00 64.57
ATOM    180  CZ  ARG A  24      -5.150  47.440  40.498  1.00 97.41
ATOM    181  NH1 ARG A  24      -5.246  48.624  41.108  1.00 81.55
ATOM    182  NH2 ARG A  24      -6.249  46.713  40.344  1.00100.00
ATOM    183  N   CYS A  25      -1.320  50.126  45.045  1.00 36.40
ATOM    184  CA  CYS A  25      -1.696  51.181  45.998  1.00 36.70
ATOM    185  C   CYS A  25      -0.996  52.522  45.815  1.00 34.57
ATOM    186  O   CYS A  25       0.030  52.676  45.100  1.00 30.46
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ATOM    187  CB  CYS A  25      -1.599  50.732  47.481  1.00 37.45
ATOM    188  SG  CYS A  25       0.119  50.641  48.047  1.00 41.07
ATOM    189  N   SER A  26      -1.606  53.493  46.507  1.00 32.19
ATOM    190  CA  SER A  26      -1.098  54.841  46.486  1.00 32.91
ATOM    191  C   SER A  26      -0.861  55.372  47.877  1.00 28.73
ATOM    192  O   SER A  26      -1.638  55.107  48.802  1.00 24.93
ATOM    193  CB  SER A  26      -1.884  55.825  45.626  1.00 41.21
ATOM    194  OG  SER A  26      -0.987  56.748  45.012  1.00 55.61
ATOM    195  N   VAL A  27       0.258  56.092  47.964  1.00 28.06
ATOM    196  CA  VAL A  27       0.719  56.718  49.172  1.00 29.85
ATOM    197  C   VAL A  27       0.330  58.199  49.211  1.00 33.50
ATOM    198  O   VAL A  27       0.868  59.024  48.443  1.00 31.85
ATOM    199  CB  VAL A  27       2.217  56.509  49.370  1.00 34.37
ATOM    200  CG1 VAL A  27       2.605  57.003  50.774  1.00 35.81
ATOM    201  CG2 VAL A  27       2.481  55.004  49.263  1.00 33.03
ATOM    202  N   ASP A  28      -0.626  58.489  50.106  1.00 31.46
ATOM    203  CA  ASP A  28      -1.137  59.841  50.327  1.00 32.29
ATOM    204  C   ASP A  28      -0.700  60.403  51.687  1.00 27.74
ATOM    205  O   ASP A  28      -1.254  60.057  52.728  1.00 25.85
ATOM    206  CB  ASP A  28      -2.663  59.943  50.144  1.00 35.45
ATOM    207  CG  ASP A  28      -3.158  61.380  50.016  1.00 43.54
ATOM    208  OD1 ASP A  28      -2.559  62.348  50.463  1.00 39.89
ATOM    209  OD2 ASP A  28      -4.290  61.467  49.353  1.00 50.90
ATOM    210  N   PHE A  29       0.311  61.251  51.614  1.00 29.04
ATOM    211  CA  PHE A  29       0.913  61.918  52.741  1.00 32.69
ATOM    212  C   PHE A  29       0.011  63.004  53.317  1.00 46.23
ATOM    213  O   PHE A  29       0.021  63.341  54.511  1.00 49.95
ATOM    214  CB  PHE A  29       2.199  62.568  52.288  1.00 34.84
ATOM    215  CG  PHE A  29       3.371  61.627  52.322  1.00 37.91
ATOM    216  CD1 PHE A  29       3.961  61.270  53.534  1.00 39.04
ATOM    217  CD2 PHE A  29       3.893  61.111  51.136  1.00 39.45
ATOM    218  CE1 PHE A  29       5.064  60.419  53.565  1.00 39.96
ATOM    219  CE2 PHE A  29       4.992  60.254  51.153  1.00 43.33
ATOM    220  CZ  PHE A  29       5.573  59.908  52.373  1.00 39.81
ATOM    221  N   THR A  30      -0.788  63.569  52.445  1.00 43.44
ATOM    222  CA  THR A  30      -1.695  64.590  52.870  1.00 40.68
ATOM    223  C   THR A  30      -2.776  63.990  53.751  1.00 36.25
ATOM    224  O   THR A  30      -3.160  64.575  54.741  1.00 37.59
ATOM    225  CB  THR A  30      -2.241  65.353  51.661  1.00 44.14
ATOM    226  OG1 THR A  30      -1.312  66.379  51.280  1.00 35.00
ATOM    227  CG2 THR A  30      -3.634  65.886  51.979  1.00 42.00
ATOM    228  N   ARG A  31      -3.249  62.803  53.426  1.00 23.27
ATOM    229  CA  ARG A  31      -4.258  62.179  54.263  1.00 22.52
ATOM    230  C   ARG A  31      -3.670  61.084  55.187  1.00 28.33
ATOM    231  O   ARG A  31      -4.388  60.485  56.013  1.00 26.36
ATOM    232  CB  ARG A  31      -5.360  61.545  53.423  1.00 29.16
ATOM    233  CG  ARG A  31      -6.236  62.579  52.723  1.00 52.89
ATOM    234  CD  ARG A  31      -6.324  62.368  51.215  1.00 63.14
ATOM    235  NE  ARG A  31      -5.912  63.537  50.434  1.00 56.84
ATOM    236  CZ  ARG A  31      -6.777  64.353  49.868  1.00 58.33
ATOM    237  NH1 ARG A  31      -8.084  64.154  49.996  1.00 45.96
ATOM    238  NH2 ARG A  31      -6.335  65.393  49.166  1.00 57.96
ATOM    239  N   ARG A  32      -2.353  60.838  55.018  1.00 28.39
ATOM    240  CA  ARG A  32      -1.587  59.832  55.754  1.00 28.42
ATOM    241  C   ARG A  32      -2.248  58.498  55.548  1.00 31.13
ATOM    242  O   ARG A  32      -2.553  57.754  56.484  1.00 26.52
ATOM    243  CB  ARG A  32      -1.353  60.163  57.233  1.00 22.96
ATOM    244  CG  ARG A  32      -1.083  61.654  57.442  1.00 46.47
ATOM    245  CD  ARG A  32       0.247  62.022  58.108  1.00 65.92
ATOM    246  NE  ARG A  32       0.307  61.670  59.532  1.00 62.95
ATOM    247  CZ  ARG A  32       1.244  62.060  60.403  1.00 56.24
ATOM    248  NH1 ARG A  32       2.259  62.862  60.090  1.00 38.45
ATOM    249  NH2 ARG A  32       1.150  61.628  61.644  1.00 38.26
ATOM    250  N   THR A  33      -2.503  58.222  54.278  1.00 30.15
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ATOM	251	CA	THR	A	33	-3.148	56.969	53.940	1.00	30.69
ATOM	252	C	THR	A	33	-2.460	56.247	52.816	1.00	30.70
ATOM	253	O	THR	A	33	-1.765	56.842	51.978	1.00	27.23
ATOM	254	CB	THR	A	33	-4.603	57.146	53.467	1.00	39.23
ATOM	255	OG1	THR	A	33	-4.637	58.100	52.420	1.00	37.97
ATOM	256	CG2	THR	A	33	-5.567	57.481	54.598	1.00	34.16
ATOM	257	N	LEU	A	34	-2.719	54.950	52.842	1.00	30.87
ATOM	258	CA	LEU	A	34	-2.279	54.012	51.842	1.00	32.01
ATOM	259	C	LEU	A	34	-3.598	53.483	51.332	1.00	26.54
ATOM	260	O	LEU	A	34	-4.426	53.031	52.106	1.00	25.08
ATOM	261	CB	LEU	A	34	-1.518	52.805	52.428	1.00	35.05
ATOM	262	CG	LEU	A	34	-0.007	52.880	52.357	1.00	42.66
ATOM	263	CD1	LEU	A	34	0.537	51.446	52.425	1.00	41.75
ATOM	264	CD2	LEU	A	34	0.434	53.610	51.081	1.00	49.07
ATOM	265	N	THR	A	35	-3.828	53.576	50.050	1.00	27.44
ATOM	266	CA	THR	A	35	-5.088	53.081	49.552	1.00	29.43
ATOM	267	C	THR	A	35	-4.825	52.257	48.316	1.00	33.69
ATOM	268	O	THR	A	35	-3.896	52.559	47.532	1.00	31.06
ATOM	269	CB	THR	A	35	-6.004	54.248	49.195	1.00	49.67
ATOM	270	OG1	THR	A	35	-5.775	55.297	50.111	1.00	56.12
ATOM	271	CG2	THR	A	35	-7.442	53.781	49.282	1.00	53.32
ATOM	272	N	GLY	A	36	-5.638	51.220	48.172	1.00	31.25
ATOM	273	CA	GLY	A	36	-5.509	50.336	47.024	1.00	30.78
ATOM	274	C	GLY	A	36	-6.314	49.072	47.144	1.00	27.36
ATOM	275	O	GLY	A	36	-7.358	48.969	47.773	1.00	26.53
ATOM	276	N	THR	A	37	-5.809	48.080	46.504	1.00	27.32
ATOM	277	CA	THR	A	37	-6.478	46.793	46.579	1.00	29.08
ATOM	278	C	THR	A	37	-5.460	45.717	46.846	1.00	29.62
ATOM	279	O	THR	A	37	-4.321	45.787	46.370	1.00	27.85
ATOM	280	CB	THR	A	37	-7.268	46.425	45.311	1.00	35.94
ATOM	281	OG1	THR	A	37	-6.546	46.790	44.142	1.00	33.45
ATOM	282	CG2	THR	A	37	-8.601	47.144	45.350	1.00	41.23
ATOM	283	N	ALA	A	38	-5.867	44.738	47.609	1.00	28.10
ATOM	284	CA	ALA	A	38	-4.934	43.674	47.856	1.00	27.55
ATOM	285	C	ALA	A	38	-5.482	42.447	47.137	1.00	30.70
ATOM	286	O	ALA	A	38	-6.536	41.941	47.510	1.00	31.51
ATOM	287	CB	ALA	A	38	-4.803	43.425	49.339	1.00	26.00
ATOM	288	N	ALA	A	39	-4.798	41.981	46.090	1.00	27.63
ATOM	289	CA	ALA	A	39	-5.280	40.761	45.394	1.00	29.40
ATOM	290	C	ALA	A	39	-4.563	39.541	45.966	1.00	29.05
ATOM	291	O	ALA	A	39	-3.371	39.333	45.734	1.00	28.04
ATOM	292	CB	ALA	A	39	-5.024	40.787	43.888	1.00	30.14
ATOM	293	N	LEU	A	40	-5.327	38.780	46.713	1.00	26.03
ATOM	294	CA	LEU	A	40	-4.899	37.591	47.392	1.00	26.04
ATOM	295	C	LEU	A	40	-5.304	36.310	46.637	1.00	30.62
ATOM	296	O	LEU	A	40	-6.499	36.038	46.394	1.00	28.36
ATOM	297	CB	LEU	A	40	-5.596	37.499	48.779	1.00	24.92
ATOM	298	CG	LEU	A	40	-5.312	38.663	49.725	1.00	27.54
ATOM	299	CD1	LEU	A	40	-5.870	38.272	51.074	1.00	29.18
ATOM	300	CD2	LEU	A	40	-3.817	38.865	49.857	1.00	26.20
ATOM	301	N	THR	A	41	-4.302	35.498	46.326	1.00	23.66
ATOM	302	CA	THR	A	41	-4.566	34.232	45.700	1.00	23.84
ATOM	303	C	THR	A	41	-4.509	33.259	46.841	1.00	28.24
ATOM	304	O	THR	A	41	-3.448	33.076	47.421	1.00	28.49
ATOM	305	CB	THR	A	41	-3.554	33.854	44.613	1.00	38.89
ATOM	306	OG1	THR	A	41	-3.594	34.801	43.555	1.00	32.11
ATOM	307	CG2	THR	A	41	-3.856	32.426	44.113	1.00	33.97
ATOM	308	N	VAL	A	42	-5.674	32.704	47.169	1.00	25.76
ATOM	309	CA	VAL	A	42	-5.843	31.782	48.261	1.00	26.45
ATOM	310	C	VAL	A	42	-6.068	30.356	47.804	1.00	34.04
ATOM	311	O	VAL	A	42	-6.730	30.118	46.795	1.00	33.15
ATOM	312	CB	VAL	A	42	-7.024	32.223	49.113	1.00	29.66
ATOM	313	CG1	VAL	A	42	-7.189	31.274	50.295	1.00	30.14
ATOM	314	CG2	VAL	A	42	-6.805	33.657	49.611	1.00	28.98

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ATOM    315  N   GLN A  43      -5.530  29.405  48.566  1.00 29.23
ATOM    316  CA  GLN A  43      -5.692  27.989  48.247  1.00 28.15
ATOM    317  C   GLN A  43      -6.357  27.171  49.356  1.00 31.60
ATOM    318  O   GLN A  43      -5.916  27.081  50.506  1.00 30.09
ATOM    319  CB  GLN A  43      -4.401  27.337  47.748  1.00 29.76
ATOM    320  CG  GLN A  43      -4.305  25.877  48.214  1.00 49.25
ATOM    321  CD  GLN A  43      -2.920  25.308  48.018  1.00 68.40
ATOM    322  OE1 GLN A  43      -2.508  25.059  46.882  1.00 65.93
ATOM    323  NE2 GLN A  43      -2.190  25.118  49.116  1.00 62.52
ATOM    324  N   SER A  44      -7.470  26.553  49.027  1.00 25.74
ATOM    325  CA  SER A  44      -8.159  25.793  50.027  1.00 24.21
ATOM    326  C   SER A  44      -7.406  24.562  50.434  1.00 31.27
ATOM    327  O   SER A  44      -6.701  23.950  49.642  1.00 33.21
ATOM    328  CB  SER A  44      -9.542  25.400  49.574  1.00 28.22
ATOM    329  OG  SER A  44     -10.143  24.569  50.550  1.00 36.23
ATOM    330  N   GLN A  45      -7.593  24.190  51.685  1.00 29.25
ATOM    331  CA  GLN A  45      -6.964  23.016  52.240  1.00 32.48
ATOM    332  C   GLN A  45      -8.027  22.007  52.618  1.00 41.18
ATOM    333  O   GLN A  45      -7.757  20.936  53.165  1.00 37.68
ATOM    334  CB  GLN A  45      -6.095  23.387  53.451  1.00 35.17
ATOM    335  CG  GLN A  45      -5.138  24.525  53.090  1.00 29.17
ATOM    336  CD  GLN A  45      -4.197  24.179  51.954  1.00 37.50
ATOM    337  OE1 GLN A  45      -4.107  24.903  50.939  1.00 44.48
ATOM    338  NE2 GLN A  45      -3.466  23.083  52.127  1.00 23.35
ATOM    339  N   GLU A  46      -9.258  22.387  52.322  1.00 40.69
ATOM    340  CA  GLU A  46     -10.391  21.548  52.591  1.00 41.85
ATOM    341  C   GLU A  46     -11.311  21.472  51.388  1.00 46.94
ATOM    342  O   GLU A  46     -11.146  22.143  50.367  1.00 45.45
ATOM    343  CB  GLU A  46     -11.216  21.989  53.827  1.00 42.82
ATOM    344  CG  GLU A  46     -10.736  23.256  54.548  1.00 48.14
ATOM    345  CD  GLU A  46     -11.469  23.463  55.856  1.00 62.06
ATOM    346  OE1 GLU A  46     -12.507  24.103  55.957  1.00 64.38
ATOM    347  OE2 GLU A  46     -10.880  22.875  56.871  1.00 51.57
ATOM    348  N   ASP A  47     -12.306  20.638  51.523  1.00 46.70
ATOM    349  CA  ASP A  47     -13.261  20.543  50.464  1.00 48.51
ATOM    350  C   ASP A  47     -14.408  21.358  50.947  1.00 45.90
ATOM    351  O   ASP A  47     -14.674  21.368  52.148  1.00 41.55
ATOM    352  CB  ASP A  47     -13.748  19.104  50.220  1.00 52.32
ATOM    353  CG  ASP A  47     -12.739  18.258  49.495  1.00 80.62
ATOM    354  OD1 ASP A  47     -12.338  18.505  48.364  1.00 77.22
ATOM    355  OD2 ASP A  47     -12.330  17.237  50.218  1.00100.00
ATOM    356  N   ASN A  48     -15.067  22.044  50.045  1.00 44.45
ATOM    357  CA  ASN A  48     -16.209  22.826  50.475  1.00 45.83
ATOM    358  C   ASN A  48     -15.875  24.055  51.308  1.00 46.95
ATOM    359  O   ASN A  48     -16.620  24.449  52.219  1.00 45.85
ATOM    360  CB  ASN A  48     -17.246  21.959  51.225  1.00 43.60
ATOM    361  CG  ASN A  48     -18.653  22.469  51.004  1.00 65.69
ATOM    362  OD1 ASN A  48     -18.924  23.191  50.027  1.00 68.02
ATOM    363  ND2 ASN A  48     -19.545  22.123  51.922  1.00 53.94
ATOM    364  N   LEU A  49     -14.758  24.672  51.004  1.00 40.04
ATOM    365  CA  LEU A  49     -14.445  25.850  51.741  1.00 35.92
ATOM    366  C   LEU A  49     -15.377  26.909  51.178  1.00 39.46
ATOM    367  O   LEU A  49     -15.301  27.241  49.998  1.00 36.67
ATOM    368  CB  LEU A  49     -12.977  26.218  51.556  1.00 34.20
ATOM    369  CG  LEU A  49     -12.623  27.492  52.307  1.00 36.68
ATOM    370  CD1 LEU A  49     -13.000  27.286  53.753  1.00 35.00
ATOM    371  CD2 LEU A  49     -11.135  27.785  52.181  1.00 38.84
ATOM    372  N   ARG A  50     -16.287  27.411  51.998  1.00 40.21
ATOM    373  CA  ARG A  50     -17.242  28.417  51.525  1.00 41.40
ATOM    374  C   ARG A  50     -16.907  29.859  51.901  1.00 47.29
ATOM    375  O   ARG A  50     -17.364  30.801  51.263  1.00 47.10
ATOM    376  CB  ARG A  50     -18.644  28.046  51.980  1.00 38.23
ATOM    377  CG  ARG A  50     -18.911  26.547  51.811  1.00 52.44
ATOM    378  CD  ARG A  50     -20.385  26.171  51.839  1.00 58.37
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ATOM    379  NE  ARG A  50     -20.835  25.461  50.643  1.00 80.87
ATOM    380  CZ  ARG A  50     -21.951  24.727  50.592  1.00100.00
ATOM    381  NH1 ARG A  50     -22.750  24.575  51.652  1.00100.00
ATOM    382  NH2 ARG A  50     -22.272  24.127  49.446  1.00 65.83
ATOM    383  N   SER A  51     -16.102  30.024  52.945  1.00 43.64
ATOM    384  CA  SER A  51     -15.714  31.334  53.418  1.00 41.14
ATOM    385  C   SER A  51     -14.454  31.283  54.259  1.00 44.29
ATOM    386  O   SER A  51     -14.253  30.319  55.016  1.00 46.38
ATOM    387  CB  SER A  51     -16.821  31.863  54.321  1.00 45.40
ATOM    388  OG  SER A  51     -16.862  31.143  55.556  1.00 46.27
ATOM    389  N   LEU A  52     -13.623  32.330  54.156  1.00 36.51
ATOM    390  CA  LEU A  52     -12.418  32.411  54.964  1.00 36.39
ATOM    391  C   LEU A  52     -12.369  33.667  55.852  1.00 42.80
ATOM    392  O   LEU A  52     -13.113  34.644  55.647  1.00 40.92
ATOM    393  CB  LEU A  52     -11.103  32.143  54.203  1.00 35.84
ATOM    394  CG  LEU A  52     -10.729  33.115  53.095  1.00 39.41
ATOM    395  CD1 LEU A  52     -11.745  33.042  51.994  1.00 41.33
ATOM    396  CD2 LEU A  52     -10.624  34.538  53.605  1.00 38.19
ATOM    397  N   VAL A  53     -11.491  33.659  56.859  1.00 37.98
ATOM    398  CA  VAL A  53     -11.331  34.834  57.737  1.00 34.43
ATOM    399  C   VAL A  53      -9.933  35.384  57.550  1.00 31.66
ATOM    400  O   VAL A  53      -8.975  34.606  57.511  1.00 28.02
ATOM    401  CB  VAL A  53     -11.601  34.597  59.226  1.00 37.95
ATOM    402  CG1 VAL A  53     -11.580  35.929  59.989  1.00 37.38
ATOM    403  CG2 VAL A  53     -12.946  33.922  59.419  1.00 37.84
ATOM    404  N   LEU A  54      -9.829  36.705  57.418  1.00 23.95
ATOM    405  CA  LEU A  54      -8.558  37.365  57.270  1.00 22.89
ATOM    406  C   LEU A  54      -8.395  38.285  58.470  1.00 29.33
ATOM    407  O   LEU A  54      -9.388  38.613  59.138  1.00 25.65
ATOM    408  CB  LEU A  54      -8.515  38.242  56.019  1.00 23.57
ATOM    409  CG  LEU A  54      -8.458  37.469  54.700  1.00 32.01
ATOM    410  CD1 LEU A  54      -8.345  38.475  53.541  1.00 31.66
ATOM    411  CD2 LEU A  54      -7.271  36.505  54.684  1.00 24.96
ATOM    412  N   ASP A  55      -7.145  38.698  58.732  1.00 28.72
ATOM    413  CA  ASP A  55      -6.830  39.616  59.831  1.00 24.54
ATOM    414  C   ASP A  55      -6.845  41.043  59.289  1.00 22.50
ATOM    415  O   ASP A  55      -6.460  41.312  58.173  1.00 21.41
ATOM    416  CB  ASP A  55      -5.446  39.344  60.500  1.00 25.99
ATOM    417  CG  ASP A  55      -5.298  38.132  61.418  1.00 23.16
ATOM    418  OD1 ASP A  55      -5.887  37.985  62.470  1.00 27.99
ATOM    419  OD2 ASP A  55      -4.408  37.248  60.991  1.00 24.58
ATOM    420  N   THR A  56      -7.309  41.977  60.109  1.00 21.37
ATOM    421  CA  THR A  56      -7.346  43.373  59.748  1.00 22.34
ATOM    422  C   THR A  56      -7.167  44.196  61.019  1.00 25.71
ATOM    423  O   THR A  56      -7.573  43.726  62.088  1.00 26.22
ATOM    424  CB  THR A  56      -8.727  43.717  59.133  1.00 34.75
ATOM    425  OG1 THR A  56      -9.668  43.936  60.183  1.00 35.02
ATOM    426  CG2 THR A  56      -9.210  42.578  58.241  1.00 40.12
ATOM    427  N   LYS A  57      -6.598  45.405  60.918  1.00 20.41
ATOM    428  CA  LYS A  57      -6.478  46.239  62.114  1.00 19.63
ATOM    429  C   LYS A  57      -6.656  47.686  61.717  1.00 21.21
ATOM    430  O   LYS A  57      -5.851  48.222  60.995  1.00 19.18
ATOM    431  CB  LYS A  57      -5.182  45.983  62.827  1.00 21.05
ATOM    432  CG  LYS A  57      -5.137  46.424  64.271  1.00 26.38
ATOM    433  CD  LYS A  57      -3.713  46.855  64.626  1.00 44.32
ATOM    434  CE  LYS A  57      -3.331  46.750  66.099  1.00 61.77
ATOM    435  NZ  LYS A  57      -1.996  47.313  66.396  1.00 53.68
ATOM    436  N   ASP A  58      -7.739  48.322  62.162  1.00 23.32
ATOM    437  CA  ASP A  58      -7.952  49.707  61.772  1.00 22.42
ATOM    438  C   ASP A  58      -7.930  49.875  60.266  1.00 27.00
ATOM    439  O   ASP A  58      -7.376  50.808  59.668  1.00 24.72
ATOM    440  CB  ASP A  58      -6.971  50.657  62.459  1.00 24.48
ATOM    441  CG  ASP A  58      -7.104  50.494  63.928  1.00 36.08
ATOM    442  OD1 ASP A  58      -8.187  50.358  64.474  1.00 38.70
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ATOM    443  OD2 ASP A  58      -5.944  50.459  64.535  1.00 37.78
ATOM    444  N   LEU A  59      -8.530  48.936  59.611  1.00 26.57
ATOM    445  CA  LEU A  59      -8.545  49.049  58.177  1.00 26.97
ATOM    446  C   LEU A  59      -9.946  49.473  57.707  1.00 30.09
ATOM    447  O   LEU A  59     -10.971  49.074  58.245  1.00 28.07
ATOM    448  CB  LEU A  59      -8.132  47.698  57.479  1.00 26.65
ATOM    449  CG  LEU A  59      -6.639  47.356  57.443  1.00 24.34
ATOM    450  CD1 LEU A  59      -6.445  46.049  56.687  1.00 25.03
ATOM    451  CD2 LEU A  59      -5.864  48.443  56.722  1.00 21.60
ATOM    452  N   THR A  60      -9.982  50.278  56.673  1.00 29.73
ATOM    453  CA  THR A  60     -11.244  50.685  56.091  1.00 30.53
ATOM    454  C   THR A  60     -11.433  49.876  54.791  1.00 34.07
ATOM    455  O   THR A  60     -10.634  49.978  53.813  1.00 29.18
ATOM    456  CB  THR A  60     -11.282  52.198  55.881  1.00 38.77
ATOM    457  OG1 THR A  60     -11.898  52.759  57.020  1.00 55.62
ATOM    458  CG2 THR A  60     -12.086  52.528  54.635  1.00 42.40
ATOM    459  N   ILE A  61     -12.465  49.042  54.808  1.00 30.99
ATOM    460  CA  ILE A  61     -12.758  48.181  53.667  1.00 33.20
ATOM    461  C   ILE A  61     -13.821  48.708  52.741  1.00 38.63
ATOM    462  O   ILE A  61     -14.987  48.694  53.102  1.00 34.56
ATOM    463  CB  ILE A  61     -13.230  46.809  54.087  1.00 37.17
ATOM    464  CG1 ILE A  61     -12.407  46.229  55.252  1.00 37.33
ATOM    465  CG2 ILE A  61     -13.229  45.905  52.850  1.00 39.90
ATOM    466  CD1 ILE A  61     -10.929  46.003  54.937  1.00 41.79
ATOM    467  N   GLU A  62     -13.407  49.117  51.548  1.00 42.13
ATOM    468  CA  GLU A  62     -14.330  49.624  50.543  1.00 45.12
ATOM    469  C   GLU A  62     -15.208  48.498  49.976  1.00 48.64
ATOM    470  O   GLU A  62     -16.442  48.537  49.984  1.00 49.46
ATOM    471  CB  GLU A  62     -13.550  50.305  49.397  1.00 47.88
ATOM    472  CG  GLU A  62     -14.390  51.345  48.620  1.00 73.90
ATOM    473  CD  GLU A  62     -15.062  50.839  47.363  1.00100.00
ATOM    474  OE1 GLU A  62     -16.062  50.129  47.371  1.00100.00
ATOM    475  OE2 GLU A  62     -14.492  51.296  46.267  1.00100.00
ATOM    476  N   LYS A  63     -14.551  47.459  49.483  1.00 40.80
ATOM    477  CA  LYS A  63     -15.283  46.342  48.931  1.00 36.23
ATOM    478  C   LYS A  63     -14.377  45.153  48.678  1.00 34.27
ATOM    479  O   LYS A  63     -13.167  45.306  48.512  1.00 29.28
ATOM    480  CB  LYS A  63     -15.891  46.760  47.601  1.00 32.16
ATOM    481  CG  LYS A  63     -14.816  47.067  46.573  1.00 22.38
ATOM    482  CD  LYS A  63     -15.373  47.148  45.162  1.00 32.02
ATOM    483  CE  LYS A  63     -14.778  48.257  44.308  1.00 33.99
ATOM    484  NZ  LYS A  63     -13.723  47.814  43.365  1.00 52.00
ATOM    485  N   VAL A  64     -15.001  43.985  48.614  1.00 36.16
ATOM    486  CA  VAL A  64     -14.292  42.751  48.306  1.00 39.33
ATOM    487  C   VAL A  64     -14.792  42.157  46.993  1.00 43.15
ATOM    488  O   VAL A  64     -15.971  41.822  46.859  1.00 38.90
ATOM    489  CB  VAL A  64     -14.401  41.692  49.370  1.00 42.66
ATOM    490  CG1 VAL A  64     -13.465  40.566  48.928  1.00 42.11
ATOM    491  CG2 VAL A  64     -14.028  42.276  50.730  1.00 40.96
ATOM    492  N   VAL A  65     -13.892  42.023  46.036  1.00 40.44
ATOM    493  CA  VAL A  65     -14.287  41.505  44.739  1.00 37.94
ATOM    494  C   VAL A  65     -13.708  40.162  44.350  1.00 35.48
ATOM    495  O   VAL A  65     -12.511  39.915  44.474  1.00 31.12
ATOM    496  CB  VAL A  65     -14.047  42.540  43.647  1.00 39.44
ATOM    497  CG1 VAL A  65     -14.238  41.899  42.287  1.00 38.78
ATOM    498  CG2 VAL A  65     -15.024  43.692  43.844  1.00 38.69
ATOM    499  N   ILE A  66     -14.599  39.316  43.847  1.00 32.12
ATOM    500  CA  ILE A  66     -14.223  38.010  43.372  1.00 31.54
ATOM    501  C   ILE A  66     -14.825  37.784  41.993  1.00 37.42
ATOM    502  O   ILE A  66     -16.033  37.896  41.794  1.00 34.45
ATOM    503  CB  ILE A  66     -14.602  36.884  44.313  1.00 32.82
ATOM    504  CG1 ILE A  66     -13.945  37.071  45.664  1.00 30.69
ATOM    505  CG2 ILE A  66     -14.117  35.581  43.703  1.00 32.94
ATOM    506  CD1 ILE A  66     -14.478  36.125  46.731  1.00 25.31
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ATOM    507  N   ASN A  67     -13.968  37.498  41.027  1.00 38.89
ATOM    508  CA  ASN A  67     -14.426  37.278  39.668  1.00 39.33
ATOM    509  C   ASN A  67     -15.373  38.366  39.223  1.00 42.51
ATOM    510  O   ASN A  67     -16.525  38.092  38.906  1.00 39.37
ATOM    511  CB  ASN A  67     -15.095  35.904  39.501  1.00 35.20
ATOM    512  CG  ASN A  67     -14.141  34.765  39.862  1.00 61.24
ATOM    513  OD1 ASN A  67     -12.900  34.842  39.669  1.00 47.44
ATOM    514  ND2 ASN A  67     -14.717  33.706  40.421  1.00 42.22
ATOM    515  N   GLY A  68     -14.848  39.590  39.237  1.00 39.48
ATOM    516  CA  GLY A  68     -15.527  40.809  38.826  1.00 37.68
ATOM    517  C   GLY A  68     -16.763  41.167  39.612  1.00 39.81
ATOM    518  O   GLY A  68     -17.380  42.197  39.398  1.00 43.86
ATOM    519  N   GLN A  69     -17.173  40.333  40.513  1.00 33.09
ATOM    520  CA  GLN A  69     -18.351  40.732  41.230  1.00 34.40
ATOM    521  C   GLN A  69     -17.958  41.090  42.626  1.00 47.27
ATOM    522  O   GLN A  69     -16.841  40.790  43.059  1.00 49.22
ATOM    523  CB  GLN A  69     -19.416  39.624  41.285  1.00 36.28
ATOM    524  CG  GLN A  69     -19.908  39.174  39.893  1.00 42.32
ATOM    525  CD  GLN A  69     -20.467  40.321  39.111  1.00 54.27
ATOM    526  OE1 GLN A  69     -19.968  40.635  38.025  1.00 50.67
ATOM    527  NE2 GLN A  69     -21.462  40.989  39.696  1.00 59.09
ATOM    528  N   GLU A  70     -18.898  41.715  43.318  1.00 45.54
ATOM    529  CA  GLU A  70     -18.697  42.105  44.682  1.00 43.70
ATOM    530  C   GLU A  70     -19.236  40.986  45.548  1.00 50.02
ATOM    531  O   GLU A  70     -20.200  40.332  45.162  1.00 55.78
ATOM    532  CB  GLU A  70     -19.351  43.459  44.985  1.00 43.37
ATOM    533  CG  GLU A  70     -18.528  44.659  44.476  1.00 45.21
ATOM    534  CD  GLU A  70     -19.093  45.975  44.964  1.00 80.18
ATOM    535  OE1 GLU A  70     -19.937  46.064  45.861  1.00 51.66
ATOM    536  OE2 GLU A  70     -18.594  47.005  44.319  1.00 79.05
ATOM    537  N   VAL A  71     -18.611  40.735  46.695  1.00 37.89
ATOM    538  CA  VAL A  71     -19.067  39.666  47.551  1.00 33.11
ATOM    539  C   VAL A  71     -19.420  40.129  48.963  1.00 35.14
ATOM    540  O   VAL A  71     -19.165  41.257  49.380  1.00 36.32
ATOM    541  CB  VAL A  71     -18.147  38.422  47.497  1.00 33.37
ATOM    542  CG1 VAL A  71     -17.772  38.119  46.050  1.00 31.13
ATOM    543  CG2 VAL A  71     -16.866  38.594  48.326  1.00 31.47
ATOM    544  N   LYS A  72     -20.016  39.247  49.696  1.00 31.08
ATOM    545  CA  LYS A  72     -20.385  39.549  51.037  1.00 34.55
ATOM    546  C   LYS A  72     -19.155  39.360  51.922  1.00 46.45
ATOM    547  O   LYS A  72     -18.344  38.455  51.678  1.00 44.93
ATOM    548  CB  LYS A  72     -21.484  38.586  51.447  1.00 37.84
ATOM    549  CG  LYS A  72     -22.553  39.153  52.362  1.00 60.35
ATOM    550  CD  LYS A  72     -22.630  38.370  53.660  1.00 78.18
ATOM    551  CE  LYS A  72     -21.389  38.589  54.500  1.00 92.99
ATOM    552  NZ  LYS A  72     -20.860  39.935  54.295  1.00100.00
ATOM    553  N   TYR A  73     -19.051  40.242  52.930  1.00 45.41
ATOM    554  CA  TYR A  73     -18.006  40.276  53.941  1.00 45.13
ATOM    555  C   TYR A  73     -18.474  41.017  55.167  1.00 47.06
ATOM    556  O   TYR A  73     -19.231  41.979  55.089  1.00 45.05
ATOM    557  CB  TYR A  73     -16.720  40.932  53.488  1.00 44.74
ATOM    558  CG  TYR A  73     -16.753  42.438  53.504  1.00 47.77
ATOM    559  CD1 TYR A  73     -16.507  43.169  54.674  1.00 50.00
ATOM    560  CD2 TYR A  73     -17.005  43.133  52.306  1.00 49.34
ATOM    561  CE1 TYR A  73     -16.519  44.565  54.662  1.00 52.06
ATOM    562  CE2 TYR A  73     -16.967  44.529  52.284  1.00 50.56
ATOM    563  CZ  TYR A  73     -16.684  45.235  53.452  1.00 60.67
ATOM    564  OH  TYR A  73     -16.859  46.597  53.418  1.00 66.04
ATOM    565  N   ALA A  74     -17.993  40.557  56.289  1.00 40.33
ATOM    566  CA  ALA A  74     -18.323  41.138  57.545  1.00 39.85
ATOM    567  C   ALA A  74     -17.068  41.281  58.412  1.00 47.89
ATOM    568  O   ALA A  74     -16.147  40.464  58.346  1.00 46.81
ATOM    569  CB  ALA A  74     -19.346  40.262  58.237  1.00 39.87
ATOM    570  N   LEU A  75     -17.055  42.339  59.227  1.00 42.79
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ATOM    571  CA  LEU A  75     -15.980  42.650  60.148  1.00 38.94
ATOM    572  C   LEU A  75     -16.416  42.342  61.561  1.00 44.65
ATOM    573  O   LEU A  75     -17.388  42.895  62.068  1.00 48.50
ATOM    574  CB  LEU A  75     -15.667  44.141  60.115  1.00 37.30
ATOM    575  CG  LEU A  75     -14.899  44.572  58.899  1.00 44.06
ATOM    576  CD1 LEU A  75     -14.476  46.031  59.085  1.00 47.51
ATOM    577  CD2 LEU A  75     -13.691  43.666  58.677  1.00 46.54
ATOM    578  N   GLY A  76     -15.718  41.474  62.242  1.00 39.16
ATOM    579  CA  GLY A  76     -16.145  41.228  63.597  1.00 36.77
ATOM    580  C   GLY A  76     -15.652  42.360  64.461  1.00 31.43
ATOM    581  O   GLY A  76     -14.997  43.290  63.969  1.00 26.07
ATOM    582  N   GLU A  77     -15.973  42.281  65.736  1.00 32.78
ATOM    583  CA  GLU A  77     -15.539  43.318  66.645  1.00 34.78
ATOM    584  C   GLU A  77     -14.050  43.214  66.886  1.00 38.63
ATOM    585  O   GLU A  77     -13.431  42.176  66.641  1.00 34.85
ATOM    586  CB  GLU A  77     -16.337  43.338  67.966  1.00 37.18
ATOM    587  CG  GLU A  77     -16.506  41.956  68.643  1.00 56.65
ATOM    588  CD  GLU A  77     -16.316  41.990  70.151  1.00100.00
ATOM    589  OE1 GLU A  77     -16.789  42.859  70.877  1.00100.00
ATOM    590  OE2 GLU A  77     -15.603  40.975  70.597  1.00100.00
ATOM    591  N   ARG A  78     -13.483  44.312  67.343  1.00 37.73
ATOM    592  CA  ARG A  78     -12.068  44.336  67.624  1.00 37.11
ATOM    593  C   ARG A  78     -11.709  43.545  68.889  1.00 39.61
ATOM    594  O   ARG A  78     -12.422  43.549  69.906  1.00 36.40
ATOM    595  CB  ARG A  78     -11.522  45.744  67.693  1.00 33.62
ATOM    596  CG  ARG A  78      -9.991  45.807  67.699  1.00 34.93
ATOM    597  CD  ARG A  78      -9.516  47.207  68.040  1.00 32.03
ATOM    598  NE  ARG A  78      -8.083  47.397  68.058  1.00 33.71
ATOM    599  CZ  ARG A  78      -7.459  48.239  67.241  1.00 53.03
ATOM    600  NH1 ARG A  78      -8.114  48.941  66.314  1.00 39.56
ATOM    601  NH2 ARG A  78      -6.139  48.361  67.337  1.00 53.05
ATOM    602  N   GLN A  79     -10.576  42.842  68.795  1.00 33.34
ATOM    603  CA  GLN A  79     -10.044  42.052  69.881  1.00 32.25
ATOM    604  C   GLN A  79      -8.708  42.662  70.221  1.00 36.49
ATOM    605  O   GLN A  79      -7.651  42.164  69.834  1.00 37.41
ATOM    606  CB  GLN A  79      -9.906  40.580  69.472  1.00 31.80
ATOM    607  CG  GLN A  79     -11.263  39.972  69.092  1.00 31.70
ATOM    608  CD  GLN A  79     -11.143  38.511  68.713  1.00 62.24
ATOM    609  OE1 GLN A  79     -10.234  37.819  69.182  1.00 64.13
ATOM    610  NE2 GLN A  79     -12.046  38.033  67.862  1.00 56.77
ATOM    611  N   SER A  80      -8.787  43.794  70.893  1.00 30.40
ATOM    612  CA  SER A  80      -7.617  44.551  71.284  1.00 27.48
ATOM    613  C   SER A  80      -6.535  44.592  70.257  1.00 29.91
ATOM    614  O   SER A  80      -6.758  45.054  69.140  1.00 28.75
ATOM    615  CB  SER A  80      -7.066  44.252  72.655  1.00 27.52
ATOM    616  OG  SER A  80      -7.173  42.874  72.863  1.00 44.76
ATOM    617  N   TYR A  81      -5.350  44.133  70.671  1.00 27.38
ATOM    618  CA  TYR A  81      -4.162  44.180  69.820  1.00 25.29
ATOM    619  C   TYR A  81      -4.196  43.286  68.604  1.00 23.60
ATOM    620  O   TYR A  81      -3.389  43.435  67.710  1.00 26.12
ATOM    621  CB  TYR A  81      -2.861  43.992  70.632  1.00 23.78
ATOM    622  CG  TYR A  81      -2.849  42.621  71.190  1.00 21.01
ATOM    623  CD1 TYR A  81      -3.374  42.361  72.450  1.00 20.45
ATOM    624  CD2 TYR A  81      -2.387  41.569  70.406  1.00 23.13
ATOM    625  CE1 TYR A  81      -3.402  41.064  72.948  1.00 18.45
ATOM    626  CE2 TYR A  81      -2.426  40.263  70.885  1.00 24.91
ATOM    627  CZ  TYR A  81      -2.929  40.017  72.162  1.00 26.97
ATOM    628  OH  TYR A  81      -2.960  38.731  72.652  1.00 35.08
ATOM    629  N   LYS A  82      -5.125  42.370  68.568  1.00 19.77
ATOM    630  CA  LYS A  82      -5.225  41.448  67.433  1.00 19.65
ATOM    631  C   LYS A  82      -5.948  42.036  66.232  1.00 26.75
ATOM    632  O   LYS A  82      -5.821  41.545  65.107  1.00 26.09
ATOM    633  CB  LYS A  82      -5.929  40.217  67.888  1.00 19.96
ATOM    634  CG  LYS A  82      -5.039  39.427  68.808  1.00 39.72
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ATOM    635  CD  LYS A  82      -5.610  38.058  69.103  1.00 45.35
ATOM    636  CE  LYS A  82      -5.868  37.809  70.577  1.00 52.66
ATOM    637  NZ  LYS A  82      -6.016  36.375  70.879  1.00 51.38
ATOM    638  N   GLY A  83      -6.698  43.114  66.482  1.00 25.62
ATOM    639  CA  GLY A  83      -7.465  43.786  65.441  1.00 24.64
ATOM    640  C   GLY A  83      -8.857  43.145  65.324  1.00 26.15
ATOM    641  O   GLY A  83      -9.348  42.515  66.255  1.00 24.12
ATOM    642  N   SER A  84      -9.463  43.273  64.136  1.00 27.22
ATOM    643  CA  SER A  84     -10.806  42.770  63.829  1.00 27.17
ATOM    644  C   SER A  84     -10.815  41.744  62.720  1.00 29.72
ATOM    645  O   SER A  84     -10.237  41.933  61.649  1.00 30.39
ATOM    646  CB  SER A  84     -11.708  43.929  63.377  1.00 31.94
ATOM    647  OG  SER A  84     -11.719  44.976  64.344  1.00 42.05
ATOM    648  N   PRO A  85     -11.513  40.667  62.979  1.00 24.61
ATOM    649  CA  PRO A  85     -11.640  39.590  62.017  1.00 25.06
ATOM    650  C   PRO A  85     -12.480  40.005  60.819  1.00 33.19
ATOM    651  O   PRO A  85     -13.536  40.622  60.995  1.00 31.19
ATOM    652  CB  PRO A  85     -12.404  38.469  62.736  1.00 24.61
ATOM    653  CG  PRO A  85     -12.959  39.049  64.014  1.00 30.62
ATOM    654  CD  PRO A  85     -12.314  40.423  64.199  1.00 26.23
ATOM    655  N   MET A  86     -12.019  39.632  59.623  1.00 28.27
ATOM    656  CA  MET A  86     -12.754  39.924  58.411  1.00 27.27
ATOM    657  C   MET A  86     -13.227  38.650  57.699  1.00 32.93
ATOM    658  O   MET A  86     -12.438  37.997  57.038  1.00 27.77
ATOM    659  CB  MET A  86     -11.930  40.743  57.451  1.00 27.52
ATOM    660  CG  MET A  86     -12.756  41.222  56.274  1.00 30.43
ATOM    661  SD  MET A  86     -11.679  41.978  55.050  1.00 37.30
ATOM    662  CE  MET A  86     -12.815  42.248  53.681  1.00 37.61
ATOM    663  N   GLU A  87     -14.507  38.295  57.832  1.00 34.14
ATOM    664  CA  GLU A  87     -15.060  37.093  57.184  1.00 36.06
ATOM    665  C   GLU A  87     -15.538  37.367  55.766  1.00 39.45
ATOM    666  O   GLU A  87     -16.366  38.250  55.586  1.00 41.63
ATOM    667  CB  GLU A  87     -16.211  36.499  58.003  1.00 37.41
ATOM    668  CG  GLU A  87     -16.540  35.036  57.655  1.00 43.37
ATOM    669  CD  GLU A  87     -17.445  34.371  58.657  1.00 60.02
ATOM    670  OE1 GLU A  87     -18.629  34.637  58.785  1.00 83.59
ATOM    671  OE2 GLU A  87     -16.827  33.467  59.375  1.00 74.01
ATOM    672  N   ILE A  88     -15.000  36.608  54.788  1.00 34.85
ATOM    673  CA  ILE A  88     -15.343  36.698  53.359  1.00 33.18
ATOM    674  C   ILE A  88     -16.170  35.489  52.896  1.00 42.28
ATOM    675  O   ILE A  88     -15.895  34.352  53.254  1.00 43.61
ATOM    676  CB  ILE A  88     -14.122  36.878  52.475  1.00 33.03
ATOM    677  CG1 ILE A  88     -13.251  38.003  53.020  1.00 31.03
ATOM    678  CG2 ILE A  88     -14.525  37.171  51.035  1.00 31.15
ATOM    679  CD1 ILE A  88     -12.088  38.331  52.096  1.00 33.21
ATOM    680  N   SER A  89     -17.222  35.723  52.116  1.00 41.90
ATOM    681  CA  SER A  89     -18.072  34.635  51.633  1.00 40.20
ATOM    682  C   SER A  89     -17.689  34.229  50.234  1.00 43.89
ATOM    683  O   SER A  89     -17.731  35.037  49.296  1.00 40.79
ATOM    684  CB  SER A  89     -19.557  34.959  51.685  1.00 43.23
ATOM    685  OG  SER A  89     -20.042  34.675  52.986  1.00 57.92
ATOM    686  N   LEU A  90     -17.298  32.967  50.099  1.00 41.94
ATOM    687  CA  LEU A  90     -16.945  32.481  48.793  1.00 41.32
ATOM    688  C   LEU A  90     -18.258  32.175  48.106  1.00 41.86
ATOM    689  O   LEU A  90     -19.186  31.608  48.692  1.00 41.35
ATOM    690  CB  LEU A  90     -16.014  31.252  48.856  1.00 41.25
ATOM    691  CG  LEU A  90     -14.827  31.484  49.781  1.00 43.31
ATOM    692  CD1 LEU A  90     -14.050  30.182  50.020  1.00 40.39
ATOM    693  CD2 LEU A  90     -13.940  32.569  49.162  1.00 40.88
ATOM    694  N   PRO A  91     -18.337  32.612  46.887  1.00 40.52
ATOM    695  CA  PRO A  91     -19.516  32.434  46.056  1.00 43.11
ATOM    696  C   PRO A  91     -19.516  31.058  45.401  1.00 51.36
ATOM    697  O   PRO A  91     -20.363  30.753  44.576  1.00 52.06
ATOM    698  CB  PRO A  91     -19.359  33.470  44.942  1.00 43.83
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ATOM    699  CG  PRO A  91     -17.883  33.867  44.915  1.00 48.09
ATOM    700  CD  PRO A  91     -17.268  33.373  46.217  1.00 41.44
ATOM    701  N   ILE A  92     -18.516  30.261  45.767  1.00 50.02
ATOM    702  CA  ILE A  92     -18.325  28.924  45.259  1.00 50.50
ATOM    703  C   ILE A  92     -17.525  28.128  46.242  1.00 47.69
ATOM    704  O   ILE A  92     -16.416  28.497  46.564  1.00 46.80
ATOM    705  CB  ILE A  92     -17.492  28.924  44.001  1.00 55.84
ATOM    706  CG1 ILE A  92     -18.372  29.135  42.791  1.00 58.16
ATOM    707  CG2 ILE A  92     -16.776  27.584  43.884  1.00 59.08
ATOM    708  CD1 ILE A  92     -17.568  29.038  41.493  1.00 83.51
ATOM    709  N   ALA A  93     -18.047  27.023  46.683  1.00 40.78
ATOM    710  CA  ALA A  93     -17.280  26.257  47.599  1.00 38.66
ATOM    711  C   ALA A  93     -16.066  25.735  46.892  1.00 45.36
ATOM    712  O   ALA A  93     -16.141  25.391  45.720  1.00 47.87
ATOM    713  CB  ALA A  93     -18.114  25.149  48.205  1.00 38.35
ATOM    714  N   LEU A  94     -14.956  25.716  47.630  1.00 42.52
ATOM    715  CA  LEU A  94     -13.652  25.233  47.181  1.00 41.33
ATOM    716  C   LEU A  94     -13.330  23.900  47.814  1.00 46.96
ATOM    717  O   LEU A  94     -13.719  23.618  48.948  1.00 45.93
ATOM    718  CB  LEU A  94     -12.515  26.182  47.571  1.00 39.52
ATOM    719  CG  LEU A  94     -12.515  27.449  46.748  1.00 44.05
ATOM    720  CD1 LEU A  94     -11.153  28.133  46.829  1.00 44.88
ATOM    721  CD2 LEU A  94     -12.843  27.115  45.305  1.00 45.42
ATOM    722  N   SER A  95     -12.604  23.083  47.074  1.00 44.42
ATOM    723  CA  SER A  95     -12.221  21.807  47.591  1.00 43.44
ATOM    724  C   SER A  95     -10.728  21.776  47.719  1.00 36.96
ATOM    725  O   SER A  95     -10.038  22.639  47.187  1.00 33.14
ATOM    726  CB  SER A  95     -12.739  20.704  46.696  1.00 51.13
ATOM    727  OG  SER A  95     -14.083  20.459  47.074  1.00 60.97
ATOM    728  N   LYS A  96     -10.240  20.779  48.407  1.00 33.03
ATOM    729  CA  LYS A  96      -8.818  20.694  48.557  1.00 33.15
ATOM    730  C   LYS A  96      -8.122  21.204  47.321  1.00 37.16
ATOM    731  O   LYS A  96      -8.514  20.922  46.188  1.00 38.12
ATOM    732  CB  LYS A  96      -8.348  19.290  48.861  1.00 34.42
ATOM    733  CG  LYS A  96      -8.583  18.910  50.298  1.00 57.96
ATOM    734  CD  LYS A  96      -8.422  17.423  50.553  1.00 73.54
ATOM    735  CE  LYS A  96      -9.475  16.882  51.512  1.00 94.46
ATOM    736  NZ  LYS A  96      -9.837  15.475  51.246  1.00100.00
ATOM    737  N   ASN A  97      -7.069  21.958  47.573  1.00 29.05
ATOM    738  CA  ASN A  97      -6.213  22.528  46.568  1.00 25.85
ATOM    739  C   ASN A  97      -6.783  23.479  45.576  1.00 31.84
ATOM    740  O   ASN A  97      -6.064  23.909  44.682  1.00 33.02
ATOM    741  CB  ASN A  97      -5.166  21.572  46.006  1.00 33.23
ATOM    742  CG  ASN A  97      -4.289  21.018  47.135  1.00 55.19
ATOM    743  OD1 ASN A  97      -4.009  19.823  47.186  1.00 56.15
ATOM    744  ND2 ASN A  97      -3.873  21.867  48.073  1.00 43.36
ATOM    745  N   GLN A  98      -8.053  23.835  45.730  1.00 32.99
ATOM    746  CA  GLN A  98      -8.611  24.798  44.792  1.00 35.56
ATOM    747  C   GLN A  98      -8.259  26.220  45.204  1.00 40.34
ATOM    748  O   GLN A  98      -8.208  26.541  46.381  1.00 37.21
ATOM    749  CB  GLN A  98     -10.111  24.610  44.555  1.00 38.17
ATOM    750  CG  GLN A  98     -10.446  23.220  43.974  1.00 47.37
ATOM    751  CD  GLN A  98     -11.869  23.144  43.480  1.00 68.06
ATOM    752  OE1 GLN A  98     -12.676  22.343  43.981  1.00 68.25
ATOM    753  NE2 GLN A  98     -12.184  24.014  42.527  1.00 58.46
ATOM    754  N   GLU A  99      -8.007  27.049  44.206  1.00 42.57
ATOM    755  CA  GLU A  99      -7.630  28.442  44.380  1.00 43.65
ATOM    756  C   GLU A  99      -8.649  29.427  43.778  1.00 47.15
ATOM    757  O   GLU A  99      -9.262  29.166  42.734  1.00 44.38
ATOM    758  CB  GLU A  99      -6.229  28.688  43.745  1.00 44.65
ATOM    759  CG  GLU A  99      -5.210  27.549  44.026  1.00 62.98
ATOM    760  CD  GLU A  99      -3.804  27.766  43.496  1.00 92.15
ATOM    761  OE1 GLU A  99      -3.299  28.867  43.338  1.00100.00
ATOM    762  OE2 GLU A  99      -3.191  26.625  43.252  1.00 78.70
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ATOM    763  N   ILE A 100      -8.801  30.565  44.468  1.00 41.83
ATOM    764  CA  ILE A 100      -9.632  31.698  44.080  1.00 38.88
ATOM    765  C   ILE A 100      -8.784  32.895  44.373  1.00 43.54
ATOM    766  O   ILE A 100      -7.812  32.830  45.135  1.00 42.91
ATOM    767  CB  ILE A 100     -10.879  31.971  44.904  1.00 42.18
ATOM    768  CG1 ILE A 100     -10.849  31.355  46.271  1.00 47.13
ATOM    769  CG2 ILE A 100     -12.225  31.875  44.204  1.00 41.40
ATOM    770  CD1 ILE A 100     -10.493  32.395  47.331  1.00 74.72
ATOM    771  N   VAL A 101      -9.156  34.001  43.784  1.00 39.29
ATOM    772  CA  VAL A 101      -8.461  35.229  44.067  1.00 37.27
ATOM    773  C   VAL A 101      -9.435  36.255  44.626  1.00 39.62
ATOM    774  O   VAL A 101     -10.516  36.464  44.098  1.00 38.28
ATOM    775  CB  VAL A 101      -7.425  35.723  43.080  1.00 36.91
ATOM    776  CG1 VAL A 101      -7.497  34.980  41.770  1.00 34.64
ATOM    777  CG2 VAL A 101      -7.482  37.237  42.939  1.00 35.34
ATOM    778  N   ILE A 102      -9.078  36.828  45.749  1.00 31.68
ATOM    779  CA  ILE A 102      -9.924  37.777  46.403  1.00 28.22
ATOM    780  C   ILE A 102      -9.328  39.135  46.284  1.00 31.14
ATOM    781  O   ILE A 102      -8.173  39.344  46.618  1.00 31.20
ATOM    782  CB  ILE A 102     -10.086  37.348  47.841  1.00 30.22
ATOM    783  CG1 ILE A 102     -10.432  35.863  47.821  1.00 30.27
ATOM    784  CG2 ILE A 102     -11.214  38.112  48.495  1.00 30.53
ATOM    785  CD1 ILE A 102     -10.807  35.275  49.187  1.00 36.83
ATOM    786  N   GLU A 103     -10.087  40.073  45.761  1.00 26.48
ATOM    787  CA  GLU A 103      -9.510  41.390  45.655  1.00 30.38
ATOM    788  C   GLU A 103     -10.196  42.340  46.596  1.00 38.06
ATOM    789  O   GLU A 103     -11.400  42.583  46.488  1.00 39.31
ATOM    790  CB  GLU A 103      -9.496  41.944  44.256  1.00 31.96
ATOM    791  CG  GLU A 103      -9.063  43.403  44.237  1.00 41.76
ATOM    792  CD  GLU A 103      -9.594  44.045  43.003  1.00 80.28
ATOM    793  OE1 GLU A 103     -10.653  44.658  42.976  1.00 97.93
ATOM    794  OE2 GLU A 103      -8.842  43.798  41.957  1.00 70.69
ATOM    795  N   ILE A 104      -9.409  42.831  47.536  1.00 33.55
ATOM    796  CA  ILE A 104      -9.900  43.716  48.562  1.00 30.57
ATOM    797  C   ILE A 104      -9.417  45.121  48.376  1.00 32.37
ATOM    798  O   ILE A 104      -8.209  45.395  48.262  1.00 28.32
ATOM    799  CB  ILE A 104      -9.522  43.227  49.955  1.00 33.68
ATOM    800  CG1 ILE A 104      -9.880  41.763  50.117  1.00 31.76
ATOM    801  CG2 ILE A 104     -10.221  44.054  51.024  1.00 32.15
ATOM    802  CD1 ILE A 104      -9.097  41.073  51.227  1.00 34.97
ATOM    803  N   SER A 105     -10.433  45.980  48.336  1.00 35.99
ATOM    804  CA  SER A 105     -10.304  47.420  48.202  1.00 37.06
ATOM    805  C   SER A 105     -10.231  47.965  49.624  1.00 32.66
ATOM    806  O   SER A 105     -11.184  47.854  50.409  1.00 27.10
ATOM    807  CB  SER A 105     -11.479  48.007  47.438  1.00 41.57
ATOM    808  OG  SER A 105     -11.142  48.056  46.066  1.00 42.85
ATOM    809  N   PHE A 106      -9.069  48.495  49.970  1.00 26.79
ATOM    810  CA  PHE A 106      -8.932  48.950  51.316  1.00 24.44
ATOM    811  C   PHE A 106      -8.247  50.298  51.442  1.00 27.41
ATOM    812  O   PHE A 106      -7.592  50.835  50.512  1.00 23.66
ATOM    813  CB  PHE A 106      -8.098  47.870  52.069  1.00 25.82
ATOM    814  CG  PHE A 106      -6.659  47.899  51.602  1.00 26.84
ATOM    815  CD1 PHE A 106      -6.279  47.176  50.473  1.00 29.09
ATOM    816  CD2 PHE A 106      -5.690  48.683  52.244  1.00 26.96
ATOM    817  CE1 PHE A 106      -4.959  47.223  50.019  1.00 30.72
ATOM    818  CE2 PHE A 106      -4.371  48.760  51.788  1.00 27.84
ATOM    819  CZ  PHE A 106      -4.003  48.008  50.670  1.00 27.74
ATOM    820  N   GLU A 107      -8.390  50.814  52.669  1.00 27.81
ATOM    821  CA  GLU A 107      -7.776  52.082  53.054  1.00 30.68
ATOM    822  C   GLU A 107      -7.255  52.010  54.493  1.00 30.66
ATOM    823  O   GLU A 107      -7.991  51.628  55.409  1.00 32.52
ATOM    824  CB  GLU A 107      -8.744  53.268  52.866  1.00 33.19
ATOM    825  CG  GLU A 107      -8.059  54.652  52.795  1.00 50.92
ATOM    826  CD  GLU A 107      -9.053  55.794  52.621  1.00 75.89
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ATOM    827  OE1 GLU A 107      -9.430  56.225  51.535  1.00 61.91
ATOM    828  OE2 GLU A 107      -9.483  56.292  53.762  1.00 47.17
ATOM    829  N   THR A 108      -5.978  52.366  54.682  1.00 26.11
ATOM    830  CA  THR A 108      -5.341  52.325  56.009  1.00 28.04
ATOM    831  C   THR A 108      -5.664  53.563  56.790  1.00 32.96
ATOM    832  O   THR A 108      -5.881  54.618  56.202  1.00 30.16
ATOM    833  CB  THR A 108      -3.787  52.277  55.957  1.00 35.08
ATOM    834  OG1 THR A 108      -3.245  53.465  55.378  1.00 29.19
ATOM    835  CG2 THR A 108      -3.254  51.032  55.245  1.00 32.38
ATOM    836  N   SER A 109      -5.650  53.417  58.112  1.00 28.09
ATOM    837  CA  SER A 109      -5.890  54.508  59.057  1.00 22.39
ATOM    838  C   SER A 109      -4.612  55.300  59.248  1.00 26.59
ATOM    839  O   SER A 109      -3.497  54.766  59.191  1.00 23.06
ATOM    840  CB  SER A 109      -6.316  53.896  60.386  1.00 23.90
ATOM    841  OG  SER A 109      -6.087  54.804  61.448  1.00 27.48
ATOM    842  N   PRO A 110      -4.720  56.594  59.495  1.00 28.89
ATOM    843  CA  PRO A 110      -3.481  57.312  59.703  1.00 27.31
ATOM    844  C   PRO A 110      -2.840  56.838  60.993  1.00 27.91
ATOM    845  O   PRO A 110      -1.651  57.033  61.172  1.00 28.30
ATOM    846  CB  PRO A 110      -3.776  58.792  59.689  1.00 28.41
ATOM    847  CG  PRO A 110      -5.188  58.921  59.138  1.00 33.97
ATOM    848  CD  PRO A 110      -5.820  57.545  59.214  1.00 30.89
ATOM    849  N   LYS A 111      -3.640  56.170  61.848  1.00 21.21
ATOM    850  CA  LYS A 111      -3.137  55.620  63.098  1.00 21.20
ATOM    851  C   LYS A 111      -2.634  54.163  62.972  1.00 24.12
ATOM    852  O   LYS A 111      -2.502  53.476  63.990  1.00 27.31
ATOM    853  CB  LYS A 111      -4.188  55.688  64.202  1.00 24.13
ATOM    854  CG  LYS A 111      -4.435  57.079  64.786  1.00 44.09
ATOM    855  CD  LYS A 111      -5.146  58.027  63.832  1.00 80.95
ATOM    856  CE  LYS A 111      -6.627  57.733  63.614  1.00100.00
ATOM    857  NZ  LYS A 111      -7.193  58.483  62.473  1.00100.00
ATOM    858  N   SER A 112      -2.371  53.669  61.743  1.00 21.95
ATOM    859  CA  SER A 112      -1.891  52.278  61.499  1.00 21.09
ATOM    860  C   SER A 112      -0.709  51.968  62.438  1.00 23.23
ATOM    861  O   SER A 112       0.236  52.722  62.472  1.00 25.25
ATOM    862  CB  SER A 112      -1.467  52.084  60.034  1.00 17.80
ATOM    863  OG  SER A 112      -0.821  50.850  59.845  1.00 19.72
ATOM    864  N   SER A 113      -0.752  50.884  63.203  1.00 19.64
ATOM    865  CA  SER A 113       0.342  50.587  64.087  1.00 16.68
ATOM    866  C   SER A 113       1.539  50.087  63.316  1.00 22.16
ATOM    867  O   SER A 113       2.653  50.005  63.822  1.00 21.53
ATOM    868  CB  SER A 113      -0.061  49.633  65.183  1.00 20.15
ATOM    869  OG  SER A 113      -0.358  48.369  64.663  1.00 23.41
ATOM    870  N   ALA A 114       1.325  49.741  62.059  1.00 21.04
ATOM    871  CA  ALA A 114       2.432  49.266  61.221  1.00 19.34
ATOM    872  C   ALA A 114       3.212  50.412  60.581  1.00 20.25
ATOM    873  O   ALA A 114       4.287  50.210  60.004  1.00 20.84
ATOM    874  CB  ALA A 114       1.876  48.455  60.061  1.00 19.26
ATOM    875  N   LEU A 115       2.636  51.614  60.636  1.00 17.27
ATOM    876  CA  LEU A 115       3.281  52.725  59.992  1.00 19.18
ATOM    877  C   LEU A 115       3.619  53.896  60.870  1.00 22.95
ATOM    878  O   LEU A 115       3.042  54.162  61.924  1.00 22.70
ATOM    879  CB  LEU A 115       2.418  53.298  58.851  1.00 18.69
ATOM    880  CG  LEU A 115       1.844  52.219  57.960  1.00 24.36
ATOM    881  CD1 LEU A 115       0.784  52.871  57.078  1.00 26.30
ATOM    882  CD2 LEU A 115       2.954  51.654  57.070  1.00 21.90
ATOM    883  N   GLN A 116       4.573  54.621  60.358  1.00 19.91
ATOM    884  CA  GLN A 116       4.959  55.857  60.974  1.00 19.64
ATOM    885  C   GLN A 116       5.071  56.896  59.851  1.00 22.36
ATOM    886  O   GLN A 116       5.898  56.769  58.943  1.00 21.29
ATOM    887  CB  GLN A 116       6.195  55.857  61.891  1.00 21.78
ATOM    888  CG  GLN A 116       6.297  57.220  62.637  1.00 28.22
ATOM    889  CD  GLN A 116       7.539  57.423  63.481  1.00 33.89
ATOM    890  OE1 GLN A 116       8.458  56.585  63.489  1.00 21.37
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ATOM    891  NE2 GLN A 116       7.569  58.557  64.198  1.00 25.06
ATOM    892  N   TRP A 117       4.207  57.898  59.926  1.00 21.50
ATOM    893  CA  TRP A 117       4.163  58.982  58.973  1.00 22.21
ATOM    894  C   TRP A 117       4.909  60.164  59.588  1.00 24.80
ATOM    895  O   TRP A 117       4.500  60.677  60.633  1.00 24.36
ATOM    896  CB  TRP A 117       2.706  59.380  58.730  1.00 20.63
ATOM    897  CG  TRP A 117       1.887  58.374  57.979  1.00 21.43
ATOM    898  CD1 TRP A 117       1.079  57.439  58.532  1.00 24.14
ATOM    899  CD2 TRP A 117       1.736  58.258  56.562  1.00 20.88
ATOM    900  NE1 TRP A 117       0.467  56.706  57.553  1.00 22.57
ATOM    901  CE2 TRP A 117       0.832  57.196  56.331  1.00 24.10
ATOM    902  CE3 TRP A 117       2.279  58.953  55.467  1.00 23.47
ATOM    903  CZ2 TRP A 117       0.450  56.806  55.038  1.00 24.69
ATOM    904  CZ3 TRP A 117       1.929  58.563  54.182  1.00 26.53
ATOM    905  CH2 TRP A 117       1.022  57.503  53.974  1.00 27.59
ATOM    906  N   LEU A 118       6.000  60.565  58.932  1.00 19.11
ATOM    907  CA  LEU A 118       6.864  61.652  59.372  1.00 20.20
ATOM    908  C   LEU A 118       6.594  62.936  58.603  1.00 29.18
ATOM    909  O   LEU A 118       6.422  62.907  57.379  1.00 29.44
ATOM    910  CB  LEU A 118       8.364  61.287  59.137  1.00 21.47
ATOM    911  CG  LEU A 118       8.985  60.284  60.141  1.00 28.52
ATOM    912  CD1 LEU A 118       8.137  59.016  60.275  1.00 30.03
ATOM    913  CD2 LEU A 118      10.410  59.939  59.716  1.00 27.52
ATOM    914  N   THR A 119       6.573  64.076  59.305  1.00 23.98
ATOM    915  CA  THR A 119       6.379  65.362  58.636  1.00 19.34
ATOM    916  C   THR A 119       7.776  65.731  58.183  1.00 23.45
ATOM    917  O   THR A 119       8.736  65.253  58.783  1.00 24.77
ATOM    918  CB  THR A 119       5.910  66.402  59.682  1.00 26.76
ATOM    919  OG1 THR A 119       6.915  66.529  60.673  1.00 27.33
ATOM    920  CG2 THR A 119       4.637  65.950  60.390  1.00 28.42
ATOM    921  N   PRO A 120       7.933  66.565  57.151  1.00 22.29
ATOM    922  CA  PRO A 120       9.255  66.927  56.678  1.00 22.30
ATOM    923  C   PRO A 120      10.178  67.419  57.800  1.00 28.55
ATOM    924  O   PRO A 120      11.404  67.260  57.754  1.00 27.54
ATOM    925  CB  PRO A 120       9.059  68.024  55.624  1.00 23.05
ATOM    926  CG  PRO A 120       7.581  68.150  55.384  1.00 24.12
ATOM    927  CD  PRO A 120       6.876  67.282  56.407  1.00 21.87
ATOM    928  N   GLU A 121       9.583  68.022  58.822  1.00 28.60
ATOM    929  CA  GLU A 121      10.366  68.529  59.937  1.00 31.89
ATOM    930  C   GLU A 121      11.104  67.394  60.658  1.00 37.79
ATOM    931  O   GLU A 121      12.205  67.554  61.198  1.00 35.72
ATOM    932  CB  GLU A 121       9.442  69.247  60.938  1.00 34.43
ATOM    933  CG  GLU A 121       8.757  70.526  60.397  1.00 61.71
ATOM    934  CD  GLU A 121       7.773  70.370  59.250  1.00 95.37
ATOM    935  OE1 GLU A 121       6.808  69.624  59.252  1.00 50.70
ATOM    936  OE2 GLU A 121       8.033  71.193  58.262  1.00100.00
ATOM    937  N   GLN A 122      10.456  66.228  60.673  1.00 33.10
ATOM    938  CA  GLN A 122      11.011  65.066  61.339  1.00 30.63
ATOM    939  C   GLN A 122      12.104  64.392  60.538  1.00 33.25
ATOM    940  O   GLN A 122      12.637  63.388  60.962  1.00 33.00
ATOM    941  CB  GLN A 122       9.905  64.039  61.637  1.00 30.70
ATOM    942  CG  GLN A 122       8.966  64.462  62.774  1.00 23.20
ATOM    943  CD  GLN A 122       7.703  63.620  62.818  1.00 27.73
ATOM    944  OE1 GLN A 122       6.781  63.798  62.016  1.00 34.90
ATOM    945  NE2 GLN A 122       7.655  62.689  63.757  1.00 30.55
ATOM    946  N   THR A 123      12.427  64.912  59.356  1.00 29.61
ATOM    947  CA  THR A 123      13.438  64.288  58.495  1.00 27.96
ATOM    948  C   THR A 123      14.730  65.030  58.506  1.00 31.63
ATOM    949  O   THR A 123      14.831  66.111  59.060  1.00 34.46
ATOM    950  CB  THR A 123      12.966  64.183  57.029  1.00 24.54
ATOM    951  OG1 THR A 123      12.855  65.504  56.515  1.00 28.43
ATOM    952  CG2 THR A 123      11.594  63.521  56.985  1.00 18.48
ATOM    953  N   SER A 124      15.712  64.440  57.870  1.00 24.71
ATOM    954  CA  SER A 124      16.980  65.088  57.814  1.00 25.71
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ATOM	955	C	SER	A	124	16.886	66.308	56.900	1.00 34.45
ATOM	956	O	SER	A	124	17.399	67.377	57.227	1.00 34.98
ATOM	957	CB	SER	A	124	18.094	64.182	57.317	1.00 25.78
ATOM	958	OG	SER	A	124	18.268	63.099	58.177	1.00 34.37
ATOM	959	N	GLY	A	125	16.221	66.110	55.756	1.00 32.47
ATOM	960	CA	GLY	A	125	16.042	67.119	54.717	1.00 33.54
ATOM	961	C	GLY	A	125	15.086	68.279	55.024	1.00 38.01
ATOM	962	O	GLY	A	125	15.226	69.371	54.450	1.00 35.01
ATOM	963	N	LYS	A	126	14.100	68.055	55.893	1.00 32.87
ATOM	964	CA	LYS	A	126	13.181	69.126	56.236	1.00 30.74
ATOM	965	C	LYS	A	126	12.281	69.626	55.101	1.00 34.13
ATOM	966	O	LYS	A	126	11.453	70.517	55.351	1.00 33.10
ATOM	967	CB	LYS	A	126	13.940	70.303	56.823	1.00 31.29
ATOM	968	CG	LYS	A	126	15.031	69.877	57.790	1.00 34.55
ATOM	969	CD	LYS	A	126	14.459	69.111	58.962	1.00 40.18
ATOM	970	CE	LYS	A	126	15.496	68.661	59.973	1.00 41.28
ATOM	971	NZ	LYS	A	126	14.895	67.775	60.987	1.00 46.79
ATOM	972	N	GLU	A	127	12.436	69.079	53.869	1.00 27.28
ATOM	973	CA	GLU	A	127	11.617	69.510	52.737	1.00 26.31
ATOM	974	C	GLU	A	127	10.566	68.517	52.300	1.00 35.95
ATOM	975	O	GLU	A	127	9.636	68.879	51.575	1.00 35.05
ATOM	976	CB	GLU	A	127	12.460	69.926	51.535	1.00 27.71
ATOM	977	CG	GLU	A	127	13.434	71.052	51.871	1.00 37.61
ATOM	978	CD	GLU	A	127	12.763	72.391	51.971	1.00 42.53
ATOM	979	OE1	GLU	A	127	11.816	72.730	51.272	1.00 63.41
ATOM	980	OE2	GLU	A	127	13.334	73.149	52.873	1.00 42.43
ATOM	981	N	HIS	A	128	10.729	67.260	52.730	1.00 32.31
ATOM	982	CA	HIS	A	128	9.786	66.221	52.395	1.00 29.92
ATOM	983	C	HIS	A	128	9.400	65.337	53.570	1.00 27.82
ATOM	984	O	HIS	A	128	10.117	65.179	54.549	1.00 29.92
ATOM	985	CB	HIS	A	128	10.345	65.324	51.308	1.00 29.24
ATOM	986	CG	HIS	A	128	10.843	66.080	50.152	1.00 31.61
ATOM	987	ND1	HIS	A	128	9.978	66.601	49.205	1.00 33.89
ATOM	988	CD2	HIS	A	128	12.113	66.358	49.795	1.00 34.18
ATOM	989	CE1	HIS	A	128	10.738	67.176	48.294	1.00 33.86
ATOM	990	NE2	HIS	A	128	12.030	67.053	48.618	1.00 34.37
ATOM	991	N	PRO	A	129	8.261	64.747	53.430	1.00 21.92
ATOM	992	CA	PRO	A	129	7.756	63.846	54.424	1.00 21.51
ATOM	993	C	PRO	A	129	8.419	62.474	54.216	1.00 26.61
ATOM	994	O	PRO	A	129	9.302	62.284	53.376	1.00 25.02
ATOM	995	CB	PRO	A	129	6.265	63.736	54.162	1.00 21.80
ATOM	996	CG	PRO	A	129	6.098	64.059	52.690	1.00 28.71
ATOM	997	CD	PRO	A	129	7.353	64.818	52.263	1.00 23.90
ATOM	998	N	TYR	A	130	8.016	61.498	54.998	1.00 22.26
ATOM	999	CA	TYR	A	130	8.646	60.195	54.881	1.00 20.30
ATOM	1000	C	TYR	A	130	7.747	59.148	55.492	1.00 23.74
ATOM	1001	O	TYR	A	130	7.022	59.381	56.442	1.00 23.54
ATOM	1002	CB	TYR	A	130	9.959	60.250	55.663	1.00 20.15
ATOM	1003	CG	TYR	A	130	10.909	59.072	55.574	1.00 23.26
ATOM	1004	CD1	TYR	A	130	10.623	57.805	56.104	1.00 23.27
ATOM	1005	CD2	TYR	A	130	12.148	59.271	54.966	1.00 24.16
ATOM	1006	CE1	TYR	A	130	11.555	56.765	56.013	1.00 20.09
ATOM	1007	CE2	TYR	A	130	13.100	58.255	54.888	1.00 23.94
ATOM	1008	CZ	TYR	A	130	12.795	57.001	55.410	1.00 19.50
ATOM	1009	OH	TYR	A	130	13.751	56.053	55.281	1.00 24.55
ATOM	1010	N	LEU	A	131	7.764	57.970	54.948	1.00 21.39
ATOM	1011	CA	LEU	A	131	6.916	56.975	55.551	1.00 23.29
ATOM	1012	C	LEU	A	131	7.671	55.654	55.583	1.00 26.48
ATOM	1013	O	LEU	A	131	8.450	55.368	54.658	1.00 22.90
ATOM	1014	CB	LEU	A	131	5.632	56.805	54.721	1.00 22.31
ATOM	1015	CG	LEU	A	131	4.960	55.462	54.943	1.00 24.82
ATOM	1016	CD1	LEU	A	131	4.060	55.574	56.168	1.00 24.09
ATOM	1017	CD2	LEU	A	131	4.166	55.056	53.690	1.00 23.63
ATOM	1018	N	PHE	A	132	7.463	54.866	56.631	1.00 24.01

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ATOM   1019  CA  PHE A 132       8.101  53.539  56.711  1.00 23.69
ATOM   1020  C   PHE A 132       7.231  52.575  57.474  1.00 23.59
ATOM   1021  O   PHE A 132       6.529  52.952  58.394  1.00 20.95
ATOM   1022  CB  PHE A 132       9.545  53.507  57.253  1.00 25.79
ATOM   1023  CG  PHE A 132       9.654  53.806  58.740  1.00 26.81
ATOM   1024  CD1 PHE A 132       9.338  52.852  59.713  1.00 26.02
ATOM   1025  CD2 PHE A 132      10.102  55.055  59.169  1.00 24.48
ATOM   1026  CE1 PHE A 132       9.458  53.144  61.074  1.00 24.42
ATOM   1027  CE2 PHE A 132      10.230  55.362  60.525  1.00 23.41
ATOM   1028  CZ  PHE A 132       9.900  54.403  61.485  1.00 19.60
ATOM   1029  N   SER A 133       7.246  51.322  57.103  1.00 20.10
ATOM   1030  CA  SER A 133       6.434  50.355  57.804  1.00 17.87
ATOM   1031  C   SER A 133       7.320  49.461  58.639  1.00 18.33
ATOM   1032  O   SER A 133       8.539  49.439  58.517  1.00 21.07
ATOM   1033  CB  SER A 133       5.739  49.451  56.811  1.00 24.24
ATOM   1034  OG  SER A 133       6.735  48.694  56.128  1.00 24.12
ATOM   1035  N   GLN A 134       6.659  48.710  59.463  1.00 15.44
ATOM   1036  CA  GLN A 134       7.268  47.748  60.340  1.00 16.95
ATOM   1037  C   GLN A 134       6.181  46.760  60.729  1.00 21.06
ATOM   1038  O   GLN A 134       5.401  46.994  61.632  1.00 22.06
ATOM   1039  CB  GLN A 134       7.966  48.415  61.526  1.00 16.26
ATOM   1040  CG  GLN A 134       8.392  47.346  62.549  1.00 24.87
ATOM   1041  CD  GLN A 134       9.424  46.414  61.955  1.00 36.09
ATOM   1042  OE1 GLN A 134      10.363  46.862  61.280  1.00 25.12
ATOM   1043  NE2 GLN A 134       9.242  45.111  62.187  1.00 30.48
ATOM   1044  N   CYS A 135       6.076  45.647  60.013  1.00 15.84
ATOM   1045  CA  CYS A 135       5.025  44.712  60.313  1.00 16.52
ATOM   1046  C   CYS A 135       5.298  43.683  61.381  1.00 18.38
ATOM   1047  O   CYS A 135       4.354  43.170  61.995  1.00 19.10
ATOM   1048  CB  CYS A 135       4.649  43.908  59.067  1.00 20.50
ATOM   1049  SG  CYS A 135       4.051  44.971  57.762  1.00 25.25
ATOM   1050  N   GLN A 136       6.545  43.284  61.564  1.00 16.69
ATOM   1051  CA  GLN A 136       6.756  42.242  62.572  1.00 16.53
ATOM   1052  C   GLN A 136       6.454  42.824  63.926  1.00 20.04
ATOM   1053  O   GLN A 136       6.853  43.946  64.194  1.00 21.71
ATOM   1054  CB  GLN A 136       8.204  41.703  62.520  1.00 18.54
ATOM   1055  CG  GLN A 136       8.488  40.565  63.533  1.00 16.78
ATOM   1056  CD  GLN A 136       9.930  40.052  63.434  1.00 27.57
ATOM   1057  OE1 GLN A 136      10.835  40.746  62.930  1.00 19.61
ATOM   1058  NE2 GLN A 136      10.141  38.826  63.903  1.00 25.09
ATOM   1059  N   ALA A 137       5.730  42.087  64.769  1.00 16.79
ATOM   1060  CA  ALA A 137       5.243  40.724  64.514  1.00 16.58
ATOM   1061  C   ALA A 137       3.931  40.636  63.807  1.00 20.75
ATOM   1062  O   ALA A 137       3.798  39.912  62.836  1.00 19.63
ATOM   1063  CB  ALA A 137       5.087  39.918  65.813  1.00 16.76
ATOM   1064  N   ILE A 138       2.951  41.338  64.321  1.00 18.31
ATOM   1065  CA  ILE A 138       1.647  41.247  63.721  1.00 18.68
ATOM   1066  C   ILE A 138       1.065  42.566  63.294  1.00 19.68
ATOM   1067  O   ILE A 138      -0.053  42.896  63.633  1.00 21.65
ATOM   1068  CB  ILE A 138       0.727  40.532  64.692  1.00 20.75
ATOM   1069  CG1 ILE A 138       0.761  41.275  66.024  1.00 21.55
ATOM   1070  CG2 ILE A 138       1.241  39.124  64.882  1.00 17.75
ATOM   1071  CD1 ILE A 138      -0.211  40.698  67.044  1.00 23.44
ATOM   1072  N   HIS A 139       1.789  43.309  62.525  1.00 19.15
ATOM   1073  CA  HIS A 139       1.231  44.581  62.113  1.00 19.05
ATOM   1074  C   HIS A 139       0.899  44.615  60.644  1.00 23.60
ATOM   1075  O   HIS A 139       0.427  45.604  60.127  1.00 25.90
ATOM   1076  CB  HIS A 139       2.149  45.781  62.471  1.00 19.09
ATOM   1077  CG  HIS A 139       2.429  45.870  63.961  1.00 21.83
ATOM   1078  ND1 HIS A 139       1.476  46.324  64.872  1.00 22.32
ATOM   1079  CD2 HIS A 139       3.547  45.567  64.661  1.00 21.82
ATOM   1080  CE1 HIS A 139       2.022  46.253  66.072  1.00 21.72
ATOM   1081  NE2 HIS A 139       3.259  45.811  65.980  1.00 21.41
ATOM   1082  N   CYS A 140       1.175  43.545  59.942  1.00 21.39
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ATOM   1083  CA  CYS A 140       0.854  43.573  58.525  1.00 21.71
ATOM   1084  C   CYS A 140      -0.630  43.848  58.327  1.00 20.64
ATOM   1085  O   CYS A 140      -1.071  44.542  57.405  1.00 21.98
ATOM   1086  CB  CYS A 140       1.237  42.260  57.823  1.00 22.30
ATOM   1087  SG  CYS A 140       1.089  42.457  56.029  1.00 27.57
ATOM   1088  N   ARG A 141      -1.384  43.259  59.232  1.00 18.28
ATOM   1089  CA  ARG A 141      -2.819  43.369  59.261  1.00 20.32
ATOM   1090  C   ARG A 141      -3.265  44.823  59.352  1.00 27.93
ATOM   1091  O   ARG A 141      -4.438  45.135  59.078  1.00 29.72
ATOM   1092  CB  ARG A 141      -3.436  42.518  60.369  1.00 16.68
ATOM   1093  CG  ARG A 141      -3.035  42.944  61.781  1.00 18.27
ATOM   1094  CD  ARG A 141      -3.571  41.985  62.866  1.00 15.44
ATOM   1095  NE  ARG A 141      -2.857  40.717  62.896  1.00 20.15
ATOM   1096  CZ  ARG A 141      -2.996  39.785  63.813  1.00 20.72
ATOM   1097  NH1 ARG A 141      -3.825  39.908  64.827  1.00 16.67
ATOM   1098  NH2 ARG A 141      -2.258  38.692  63.685  1.00 22.83
ATOM   1099  N   ALA A 142      -2.314  45.707  59.754  1.00 18.15
ATOM   1100  CA  ALA A 142      -2.599  47.127  59.901  1.00 17.64
ATOM   1101  C   ALA A 142      -2.265  47.823  58.619  1.00 22.89
ATOM   1102  O   ALA A 142      -2.296  49.024  58.506  1.00 22.38
ATOM   1103  CB  ALA A 142      -1.908  47.771  61.085  1.00 17.04
ATOM   1104  N   ILE A 143      -1.925  47.041  57.621  1.00 24.40
ATOM   1105  CA  ILE A 143      -1.634  47.632  56.341  1.00 25.97
ATOM   1106  C   ILE A 143      -2.641  47.117  55.334  1.00 33.49
ATOM   1107  O   ILE A 143      -3.259  47.865  54.585  1.00 36.37
ATOM   1108  CB  ILE A 143      -0.222  47.447  55.839  1.00 29.94
ATOM   1109  CG1 ILE A 143       0.791  47.972  56.853  1.00 29.88
ATOM   1110  CG2 ILE A 143      -0.094  48.232  54.533  1.00 33.06
ATOM   1111  CD1 ILE A 143       2.224  47.722  56.389  1.00 26.42
ATOM   1112  N   LEU A 144      -2.843  45.822  55.350  1.00 28.38
ATOM   1113  CA  LEU A 144      -3.815  45.204  54.438  1.00 29.40
ATOM   1114  C   LEU A 144      -4.421  43.917  55.030  1.00 33.99
ATOM   1115  O   LEU A 144      -3.928  43.349  56.037  1.00 30.51
ATOM   1116  CB  LEU A 144      -3.213  44.969  53.037  1.00 30.43
ATOM   1117  CG  LEU A 144      -1.868  44.266  53.111  1.00 33.80
ATOM   1118  CD1 LEU A 144      -2.073  42.761  53.007  1.00 35.20
ATOM   1119  CD2 LEU A 144      -0.935  44.758  52.023  1.00 38.26
ATOM   1120  N   PRO A 145      -5.507  43.446  54.432  1.00 27.43
ATOM   1121  CA  PRO A 145      -6.094  42.259  54.979  1.00 25.19
ATOM   1122  C   PRO A 145      -5.294  41.059  54.513  1.00 23.80
ATOM   1123  O   PRO A 145      -4.832  41.009  53.376  1.00 23.96
ATOM   1124  CB  PRO A 145      -7.567  42.266  54.566  1.00 27.07
ATOM   1125  CG  PRO A 145      -7.810  43.609  53.886  1.00 31.08
ATOM   1126  CD  PRO A 145      -6.445  44.131  53.505  1.00 26.31
ATOM   1127  N   CYS A 146      -5.080  40.145  55.448  1.00 23.01
ATOM   1128  CA  CYS A 146      -4.272  38.956  55.215  1.00 24.70
ATOM   1129  C   CYS A 146      -4.329  37.973  56.367  1.00 28.20
ATOM   1130  O   CYS A 146      -4.966  38.211  57.413  1.00 23.14
ATOM   1131  CB  CYS A 146      -2.793  39.335  55.036  1.00 25.42
ATOM   1132  SG  CYS A 146      -2.164  40.274  56.463  1.00 31.88
ATOM   1133  N   GLN A 147      -3.647  36.843  56.134  1.00 22.82
ATOM   1134  CA  GLN A 147      -3.522  35.796  57.127  1.00 23.08
ATOM   1135  C   GLN A 147      -2.238  36.197  57.832  1.00 28.00
ATOM   1136  O   GLN A 147      -1.131  35.841  57.415  1.00 25.08
ATOM   1137  CB  GLN A 147      -3.346  34.427  56.449  1.00 24.85
ATOM   1138  CG  GLN A 147      -4.671  33.762  56.084  1.00 19.17
ATOM   1139  CD  GLN A 147      -4.391  32.428  55.427  1.00 25.96
ATOM   1140  OE1 GLN A 147      -3.871  32.408  54.311  1.00 20.64
ATOM   1141  NE2 GLN A 147      -4.680  31.326  56.117  1.00 20.44
ATOM   1142  N   ASP A 148      -2.408  37.011  58.860  1.00 23.32
ATOM   1143  CA  ASP A 148      -1.295  37.566  59.587  1.00 23.26
ATOM   1144  C   ASP A 148      -0.627  36.639  60.595  1.00 23.40
ATOM   1145  O   ASP A 148      -0.574  36.941  61.790  1.00 24.25
ATOM   1146  CB  ASP A 148      -1.665  38.916  60.237  1.00 24.70
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ATOM	1147	CG	ASP	A	148	-0.440	39.722	60.517	1.00 27.92
ATOM	1148	OD1	ASP	A	148	0.678	39.389	60.113	1.00 27.89
ATOM	1149	OD2	ASP	A	148	-0.695	40.795	61.224	1.00 19.92
ATOM	1150	N	THR	A	149	-0.099	35.537	60.060	1.00 19.68
ATOM	1151	CA	THR	A	149	0.607	34.501	60.793	1.00 18.44
ATOM	1152	C	THR	A	149	1.818	34.079	59.981	1.00 23.20
ATOM	1153	O	THR	A	149	1.761	34.027	58.741	1.00 18.98
ATOM	1154	CB	THR	A	149	-0.261	33.256	61.004	1.00 29.08
ATOM	1155	OG1	THR	A	149	0.577	32.168	61.421	1.00 24.67
ATOM	1156	CG2	THR	A	149	-0.979	32.910	59.680	1.00 23.64
ATOM	1157	N	PRO	A	150	2.921	33.765	60.686	1.00 21.90
ATOM	1158	CA	PRO	A	150	4.159	33.323	60.016	1.00 19.21
ATOM	1159	C	PRO	A	150	4.018	31.886	59.479	1.00 21.32
ATOM	1160	O	PRO	A	150	4.898	31.352	58.829	1.00 18.90
ATOM	1161	CB	PRO	A	150	5.260	33.356	61.103	1.00 19.24
ATOM	1162	CG	PRO	A	150	4.544	33.455	62.444	1.00 20.32
ATOM	1163	CD	PRO	A	150	3.125	33.922	62.168	1.00 20.18
ATOM	1164	N	SER	A	151	2.902	31.226	59.771	1.00 18.68
ATOM	1165	CA	SER	A	151	2.737	29.862	59.276	1.00 20.66
ATOM	1166	C	SER	A	151	2.351	29.863	57.820	1.00 22.40
ATOM	1167	O	SER	A	151	2.295	28.836	57.199	1.00 26.24
ATOM	1168	CB	SER	A	151	1.674	29.117	60.057	1.00 25.01
ATOM	1169	OG	SER	A	151	0.444	29.814	59.897	1.00 32.09
ATOM	1170	N	VAL	A	152	2.086	31.017	57.282	1.00 18.17
ATOM	1171	CA	VAL	A	152	1.696	31.105	55.899	1.00 20.54
ATOM	1172	C	VAL	A	152	2.740	31.874	55.088	1.00 26.40
ATOM	1173	O	VAL	A	152	3.159	32.955	55.494	1.00 25.43
ATOM	1174	CB	VAL	A	152	0.307	31.756	55.773	1.00 22.01
ATOM	1175	CG1	VAL	A	152	0.000	32.092	54.316	1.00 21.07
ATOM	1176	CG2	VAL	A	152	-0.742	30.818	56.325	1.00 21.78
ATOM	1177	N	LYS	A	153	3.163	31.316	53.934	1.00 21.69
ATOM	1178	CA	LYS	A	153	4.146	31.985	53.101	1.00 20.64
ATOM	1179	C	LYS	A	153	3.606	32.223	51.720	1.00 25.15
ATOM	1180	O	LYS	A	153	3.041	31.329	51.114	1.00 27.06
ATOM	1181	CB	LYS	A	153	5.455	31.218	53.016	1.00 24.18
ATOM	1182	CG	LYS	A	153	6.159	31.061	54.360	1.00 29.97
ATOM	1183	CD	LYS	A	153	7.582	30.546	54.220	1.00 19.10
ATOM	1184	CE	LYS	A	153	8.276	30.287	55.546	1.00 24.45
ATOM	1185	NZ	LYS	A	153	9.760	30.289	55.457	1.00 21.92
ATOM	1186	N	LEU	A	154	3.768	33.438	51.213	1.00 22.90
ATOM	1187	CA	LEU	A	154	3.286	33.772	49.876	1.00 22.75
ATOM	1188	C	LEU	A	154	4.280	34.594	49.091	1.00 23.26
ATOM	1189	O	LEU	A	154	5.225	35.207	49.624	1.00 21.95
ATOM	1190	CB	LEU	A	154	1.989	34.615	49.972	1.00 23.48
ATOM	1191	CG	LEU	A	154	2.246	35.948	50.729	1.00 29.06
ATOM	1192	CD1	LEU	A	154	1.385	37.086	50.200	1.00 29.05
ATOM	1193	CD2	LEU	A	154	1.986	35.788	52.225	1.00 26.55
ATOM	1194	N	THR	A	155	4.033	34.653	47.791	1.00 22.63
ATOM	1195	CA	THR	A	155	4.862	35.499	46.940	1.00 25.54
ATOM	1196	C	THR	A	155	4.088	36.820	46.772	1.00 26.35
ATOM	1197	O	THR	A	155	2.929	36.943	47.190	1.00 25.33
ATOM	1198	CB	THR	A	155	5.122	34.931	45.526	1.00 26.50
ATOM	1199	OG1	THR	A	155	3.937	34.294	45.141	1.00 31.87
ATOM	1200	CG2	THR	A	155	6.327	33.991	45.488	1.00 21.48
ATOM	1201	N	TYR	A	156	4.721	37.802	46.154	1.00 23.09
ATOM	1202	CA	TYR	A	156	4.021	39.040	45.943	1.00 22.25
ATOM	1203	C	TYR	A	156	4.631	39.924	44.889	1.00 24.76
ATOM	1204	O	TYR	A	156	5.846	39.919	44.601	1.00 28.65
ATOM	1205	CB	TYR	A	156	3.735	39.831	47.252	1.00 22.99
ATOM	1206	CG	TYR	A	156	4.853	40.754	47.751	1.00 24.46
ATOM	1207	CD1	TYR	A	156	4.992	42.048	47.246	1.00 26.47
ATOM	1208	CD2	TYR	A	156	5.744	40.356	48.755	1.00 22.08
ATOM	1209	CE1	TYR	A	156	6.003	42.894	47.704	1.00 27.20
ATOM	1210	CE2	TYR	A	156	6.755	41.194	49.242	1.00 19.36

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ATOM   1211  CZ  TYR A 156       6.874  42.476  48.709  1.00 28.26
ATOM   1212  OH  TYR A 156       7.819  43.341  49.176  1.00 23.92
ATOM   1213  N   THR A 157       3.737  40.711  44.325  1.00 20.53
ATOM   1214  CA  THR A 157       4.079  41.726  43.358  1.00 22.66
ATOM   1215  C   THR A 157       3.374  42.996  43.844  1.00 27.95
ATOM   1216  O   THR A 157       2.300  42.941  44.469  1.00 27.60
ATOM   1217  CB  THR A 157       3.660  41.345  41.931  1.00 36.12
ATOM   1218  OG1 THR A 157       2.311  40.913  41.927  1.00 35.88
ATOM   1219  CG2 THR A 157       4.528  40.177  41.502  1.00 31.47
ATOM   1220  N   ALA A 158       3.984  44.136  43.604  1.00 26.56
ATOM   1221  CA  ALA A 158       3.357  45.363  44.034  1.00 28.25
ATOM   1222  C   ALA A 158       3.661  46.555  43.115  1.00 33.79
ATOM   1223  O   ALA A 158       4.737  46.682  42.469  1.00 31.04
ATOM   1224  CB  ALA A 158       3.749  45.700  45.460  1.00 26.89
ATOM   1225  N   GLU A 159       2.693  47.453  43.081  1.00 30.94
ATOM   1226  CA  GLU A 159       2.863  48.658  42.328  1.00 32.37
ATOM   1227  C   GLU A 159       2.434  49.789  43.226  1.00 31.24
ATOM   1228  O   GLU A 159       1.311  49.803  43.735  1.00 29.85
ATOM   1229  CB  GLU A 159       2.118  48.680  40.993  1.00 35.41
ATOM   1230  CG  GLU A 159       1.749  47.300  40.444  1.00 59.87
ATOM   1231  CD  GLU A 159       0.983  47.438  39.160  1.00 98.76
ATOM   1232  OE1 GLU A 159      -0.110  47.979  39.091  1.00 78.51
ATOM   1233  OE2 GLU A 159       1.636  46.958  38.126  1.00100.00
ATOM   1234  N   VAL A 160       3.337  50.714  43.472  1.00 28.73
ATOM   1235  CA  VAL A 160       2.915  51.778  44.352  1.00 29.43
ATOM   1236  C   VAL A 160       3.180  53.148  43.786  1.00 29.09
ATOM   1237  O   VAL A 160       4.292  53.442  43.354  1.00 27.09
ATOM   1238  CB  VAL A 160       3.370  51.589  45.785  1.00 33.76
ATOM   1239  CG1 VAL A 160       4.212  50.321  45.892  1.00 33.85
ATOM   1240  CG2 VAL A 160       4.097  52.814  46.314  1.00 32.12
ATOM   1241  N   SER A 161       2.132  53.967  43.760  1.00 29.81
ATOM   1242  CA  SER A 161       2.249  55.323  43.202  1.00 29.33
ATOM   1243  C   SER A 161       2.558  56.310  44.299  1.00 30.68
ATOM   1244  O   SER A 161       1.840  56.364  45.299  1.00 32.33
ATOM   1245  CB  SER A 161       0.963  55.756  42.514  1.00 32.12
ATOM   1246  OG  SER A 161       1.074  57.091  42.092  1.00 36.30
ATOM   1247  N   VAL A 162       3.614  57.073  44.115  1.00 24.51
ATOM   1248  CA  VAL A 162       3.968  58.033  45.125  1.00 25.24
ATOM   1249  C   VAL A 162       4.187  59.371  44.477  1.00 37.10
ATOM   1250  O   VAL A 162       4.359  59.438  43.257  1.00 36.28
ATOM   1251  CB  VAL A 162       5.284  57.657  45.821  1.00 25.44
ATOM   1252  CG1 VAL A 162       5.213  56.287  46.487  1.00 24.46
ATOM   1253  CG2 VAL A 162       6.429  57.684  44.831  1.00 24.47
ATOM   1254  N   PRO A 163       4.203  60.416  45.312  1.00 31.09
ATOM   1255  CA  PRO A 163       4.476  61.733  44.805  1.00 31.84
ATOM   1256  C   PRO A 163       5.792  61.640  44.040  1.00 31.38
ATOM   1257  O   PRO A 163       6.821  61.177  44.545  1.00 30.83
ATOM   1258  CB  PRO A 163       4.545  62.640  46.047  1.00 33.90
ATOM   1259  CG  PRO A 163       3.818  61.891  47.158  1.00 36.16
ATOM   1260  CD  PRO A 163       3.635  60.458  46.680  1.00 29.11
ATOM   1261  N   LYS A 164       5.738  62.040  42.789  1.00 30.95
ATOM   1262  CA  LYS A 164       6.875  61.950  41.891  1.00 30.90
ATOM   1263  C   LYS A 164       8.223  62.361  42.405  1.00 32.87
ATOM   1264  O   LYS A 164       9.249  61.973  41.850  1.00 29.98
ATOM   1265  CB  LYS A 164       6.614  62.525  40.525  1.00 38.69
ATOM   1266  CG  LYS A 164       5.381  63.405  40.464  1.00 60.47
ATOM   1267  CD  LYS A 164       5.608  64.642  39.612  1.00 87.95
ATOM   1268  CE  LYS A 164       6.869  64.557  38.757  1.00 94.83
ATOM   1269  NZ  LYS A 164       7.762  65.712  38.926  1.00100.00
ATOM   1270  N   GLU A 165       8.253  63.168  43.445  1.00 32.55
ATOM   1271  CA  GLU A 165       9.540  63.587  43.946  1.00 33.95
ATOM   1272  C   GLU A 165      10.107  62.617  44.949  1.00 36.46
ATOM   1273  O   GLU A 165      11.245  62.742  45.348  1.00 36.58
ATOM   1274  CB  GLU A 165       9.510  65.006  44.540  1.00 37.35
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ATOM   1275  CG  GLU A 165       8.599  65.165  45.784  1.00 53.54
ATOM   1276  CD  GLU A 165       7.138  65.409  45.480  1.00 77.59
ATOM   1277  OE1 GLU A 165       6.598  65.114  44.421  1.00 44.13
ATOM   1278  OE2 GLU A 165       6.512  65.959  46.494  1.00 78.66
ATOM   1279  N   LEU A 166       9.314  61.641  45.318  1.00 33.08
ATOM   1280  CA  LEU A 166       9.772  60.695  46.299  1.00 33.49
ATOM   1281  C   LEU A 166      10.068  59.321  45.734  1.00 40.05
ATOM   1282  O   LEU A 166       9.578  58.987  44.646  1.00 41.96
ATOM   1283  CB  LEU A 166       8.727  60.596  47.423  1.00 31.45
ATOM   1284  CG  LEU A 166       8.352  61.938  48.020  1.00 29.81
ATOM   1285  CD1 LEU A 166       7.242  61.711  49.041  1.00 27.01
ATOM   1286  CD2 LEU A 166       9.598  62.582  48.632  1.00 21.37
ATOM   1287  N   VAL A 167      10.874  58.544  46.500  1.00 30.67
ATOM   1288  CA  VAL A 167      11.238  57.178  46.138  1.00 29.31
ATOM   1289  C   VAL A 167      10.478  56.157  46.996  1.00 35.64
ATOM   1290  O   VAL A 167      10.216  56.385  48.183  1.00 32.65
ATOM   1291  CB  VAL A 167      12.721  56.904  46.304  1.00 30.60
ATOM   1292  CG1 VAL A 167      13.000  55.483  45.849  1.00 29.30
ATOM   1293  CG2 VAL A 167      13.562  57.880  45.521  1.00 31.04
ATOM   1294  N   ALA A 168      10.132  55.017  46.400  1.00 33.01
ATOM   1295  CA  ALA A 168       9.453  53.943  47.115  1.00 29.38
ATOM   1296  C   ALA A 168      10.289  52.685  46.978  1.00 36.90
ATOM   1297  O   ALA A 168      10.786  52.362  45.875  1.00 37.97
ATOM   1298  CB  ALA A 168       8.046  53.694  46.637  1.00 28.00
ATOM   1299  N   LEU A 169      10.482  51.997  48.110  1.00 28.52
ATOM   1300  CA  LEU A 169      11.256  50.769  48.139  1.00 24.26
ATOM   1301  C   LEU A 169      10.464  49.738  48.879  1.00 27.24
ATOM   1302  O   LEU A 169       9.694  50.071  49.786  1.00 25.74
ATOM   1303  CB  LEU A 169      12.615  50.908  48.841  1.00 24.31
ATOM   1304  CG  LEU A 169      13.525  51.974  48.250  1.00 28.56
ATOM   1305  CD1 LEU A 169      14.739  52.181  49.173  1.00 27.05
ATOM   1306  CD2 LEU A 169      13.993  51.550  46.852  1.00 27.25
ATOM   1307  N   MET A 170      10.649  48.480  48.486  1.00 26.02
ATOM   1308  CA  MET A 170       9.952  47.392  49.144  1.00 23.03
ATOM   1309  C   MET A 170      10.856  46.224  49.455  1.00 18.57
ATOM   1310  O   MET A 170      12.033  46.212  49.085  1.00 20.77
ATOM   1311  CB  MET A 170       8.712  46.943  48.371  1.00 24.60
ATOM   1312  CG  MET A 170       7.654  47.979  48.535  1.00 25.34
ATOM   1313  SD  MET A 170       6.105  47.419  47.869  1.00 28.58
ATOM   1314  CE  MET A 170       5.380  46.463  49.232  1.00 24.66
ATOM   1315  N   SER A 171      10.298  45.244  50.173  1.00 17.78
ATOM   1316  CA  SER A 171      11.062  44.069  50.482  1.00 16.80
ATOM   1317  C   SER A 171      10.905  43.128  49.265  1.00 26.03
ATOM   1318  O   SER A 171      10.389  42.018  49.344  1.00 25.31
ATOM   1319  CB  SER A 171      10.527  43.436  51.748  1.00 17.00
ATOM   1320  OG  SER A 171       9.130  43.207  51.625  1.00 20.17
ATOM   1321  N   ALA A 172      11.298  43.612  48.095  1.00 26.60
ATOM   1322  CA  ALA A 172      11.154  42.849  46.875  1.00 25.77
ATOM   1323  C   ALA A 172      12.153  43.339  45.860  1.00 32.28
ATOM   1324  O   ALA A 172      12.897  44.299  46.114  1.00 26.87
ATOM   1325  CB  ALA A 172       9.762  43.083  46.332  1.00 25.21
ATOM   1326  N   ILE A 173      12.180  42.678  44.700  1.00 30.44
ATOM   1327  CA  ILE A 173      13.107  43.110  43.661  1.00 29.54
ATOM   1328  C   ILE A 173      12.510  44.319  42.959  1.00 30.78
ATOM   1329  O   ILE A 173      11.331  44.315  42.583  1.00 29.32
ATOM   1330  CB  ILE A 173      13.479  41.997  42.661  1.00 31.06
ATOM   1331  CG1 ILE A 173      14.210  40.874  43.388  1.00 28.42
ATOM   1332  CG2 ILE A 173      14.431  42.563  41.617  1.00 32.58
ATOM   1333  CD1 ILE A 173      15.604  41.286  43.851  1.00 33.22
ATOM   1334  N   ARG A 174      13.328  45.356  42.834  1.00 31.92
ATOM   1335  CA  ARG A 174      12.906  46.595  42.197  1.00 33.87
ATOM   1336  C   ARG A 174      12.582  46.236  40.785  1.00 39.44
ATOM   1337  O   ARG A 174      13.467  45.775  40.091  1.00 34.80
ATOM   1338  CB  ARG A 174      14.004  47.669  42.218  1.00 35.31
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ATOM   1339  CG  ARG A 174      14.186  48.368  43.579  1.00 42.88
ATOM   1340  CD  ARG A 174      15.229  49.492  43.608  1.00 39.93
ATOM   1341  NE  ARG A 174      16.516  49.129  43.013  1.00 59.20
ATOM   1342  CZ  ARG A 174      17.329  49.992  42.407  1.00 92.36
ATOM   1343  NH1 ARG A 174      17.032  51.288  42.284  1.00100.00
ATOM   1344  NH2 ARG A 174      18.474  49.542  41.901  1.00 84.94
ATOM   1345  N   ASP A 175      11.324  46.397  40.406  1.00 44.29
ATOM   1346  CA  ASP A 175      10.850  46.070  39.076  1.00 48.46
ATOM   1347  C   ASP A 175      10.987  47.236  38.107  1.00 61.94
ATOM   1348  O   ASP A 175      11.709  47.177  37.124  1.00 69.21
ATOM   1349  CB  ASP A 175       9.401  45.553  39.111  1.00 52.28
ATOM   1350  CG  ASP A 175       9.079  44.536  38.041  1.00 76.56
ATOM   1351  OD1 ASP A 175       9.926  44.028  37.313  1.00 76.21
ATOM   1352  OD2 ASP A 175       7.788  44.270  37.964  1.00 85.33
ATOM   1353  N   GLY A 176      10.293  48.309  38.369  1.00 59.49
ATOM   1354  CA  GLY A 176      10.405  49.442  37.489  1.00 59.25
ATOM   1355  C   GLY A 176       9.723  50.662  38.055  1.00 62.28
ATOM   1356  O   GLY A 176       8.958  50.585  39.026  1.00 61.93
ATOM   1357  N   GLU A 177      10.028  51.784  37.418  1.00 56.86
ATOM   1358  CA  GLU A 177       9.473  53.070  37.772  1.00 56.20
ATOM   1359  C   GLU A 177       9.128  53.804  36.495  1.00 66.31
ATOM   1360  O   GLU A 177       9.865  53.745  35.499  1.00 67.90
ATOM   1361  CB  GLU A 177      10.411  53.926  38.645  1.00 55.46
ATOM   1362  CG  GLU A 177      11.304  54.835  37.783  1.00 54.29
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ATOM   1375  C   PRO A 179       3.593  57.388  35.536  1.00 51.24
ATOM   1376  O   PRO A 179       3.192  56.586  34.698  1.00 51.46
ATOM   1377  CB  PRO A 179       4.942  59.054  34.282  1.00 53.51
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ATOM   1464  OH  TYR A 189      11.084  57.022  42.277  1.00 44.92
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ATOM   1513  C   VAL A 195       9.385  33.947  48.108  1.00 27.87
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ATOM   1530  CG1 ILE A 197       7.317  36.930  51.510  1.00 23.26
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United States Patent and Trademark Office

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APPLICATION NUMBER: ***60/122,110***
FILING DATE: ***February 26, 1999***

PRIORITY DOCUMENT

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COMMISSIONER OF PATENTS AND TRADEMARKS

P. SWAIN
Certifying Officer

PART (2) OF (2) PART(S)

ATOM	1290	O	VAL	A	167	9.902	56.532	47.879	1.00	40.91
ATOM	1291	CB	VAL	A	167	12.549	56.860	46.048	1.00	31.28
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ATOM	1350	CG	ASP	A	175	9.196	44.446	37.675	1.00	81.25

ATOM	1351	OD1	ASP	A	175	10.034	44.118	36.851	1.00 83.53
ATOM	1352	OD2	ASP	A	175	7.910	44.176	37.558	1.00 92.45
ATOM	1353	N	GLY	A	176	11.062	48.356	38.331	1.00 58.24
ATOM	1354	CA	GLY	A	176	11.021	49.498	37.438	1.00 57.71
ATOM	1355	C	GLY	A	176	9.969	50.546	37.773	1.00 58.98
ATOM	1356	O	GLY	A	176	9.090	50.371	38.620	1.00 52.04
ATOM	1357	N	GLU	A	177	10.110	51.649	37.050	1.00 63.72
ATOM	1358	CA	GLU	A	177	9.267	52.812	37.172	1.00 67.79
ATOM	1359	C	GLU	A	177	8.874	53.388	35.817	1.00 86.22
ATOM	1360	O	GLU	A	177	9.614	53.364	34.830	1.00 91.14
ATOM	1361	CB	GLU	A	177	9.986	53.902	38.006	1.00 68.25
ATOM	1362	CG	GLU	A	177	11.432	54.145	37.519	1.00 71.58
ATOM	1363	CD	GLU	A	177	12.183	55.088	38.404	1.00 85.08
ATOM	1364	OE1	GLU	A	177	13.045	54.733	39.198	1.00100.00
ATOM	1365	OE2	GLU	A	177	11.765	56.316	38.264	1.00 56.71
ATOM	1366	N	THR	A	178	7.671	53.924	35.835	1.00 84.76
ATOM	1367	CA	THR	A	178	6.684	54.686	35.042	1.00 84.81
ATOM	1368	C	THR	A	178	6.024	55.810	35.855	1.00 90.37
ATOM	1369	O	THR	A	178	5.664	55.655	36.996	1.00 91.10
ATOM	1370	CB	THR	A	178	5.618	53.713	34.561	1.00 89.82
ATOM	1371	OG1	THR	A	178	5.283	52.830	35.636	1.00 80.25
ATOM	1372	CG2	THR	A	178	6.161	52.898	33.396	1.00 93.46
ATOM	1373	N	PRO	A	179	5.921	56.984	35.217	1.00 87.05
ATOM	1374	CA	PRO	A	179	5.365	58.187	35.845	1.00 86.61
ATOM	1375	C	PRO	A	179	3.857	58.419	35.531	1.00 89.04
ATOM	1376	O	PRO	A	179	3.444	59.516	35.140	1.00 91.15
ATOM	1377	CB	PRO	A	179	6.176	59.345	35.301	1.00 88.63
ATOM	1378	CG	PRO	A	179	6.657	58.947	33.895	1.00 92.62
ATOM	1379	CD	PRO	A	179	6.426	57.345	33.902	1.00 87.63
ATOM	1380	N	ASP	A	180	3.020	57.347	35.694	1.00 82.31
ATOM	1381	CA	ASP	A	180	1.616	57.568	35.310	1.00 81.19
ATOM	1382	C	ASP	A	180	0.629	56.743	36.166	1.00 90.72
ATOM	1383	O	ASP	A	180	0.533	55.519	36.072	1.00 91.13
ATOM	1384	CB	ASP	A	180	1.458	57.196	33.827	1.00 82.12
ATOM	1385	CG	ASP	A	180	0.087	57.651	33.327	1.00 95.94
ATOM	1386	OD1	ASP	A	180	-0.155	58.858	33.337	1.00100.00
ATOM	1387	OD2	ASP	A	180	-0.714	56.801	32.946	1.00 94.36
ATOM	1388	N	PRO	A	181	-0.060	57.456	37.086	1.00 92.45
ATOM	1389	CA	PRO	A	181	-1.212	56.934	37.795	1.00 92.02
ATOM	1390	C	PRO	A	181	-2.519	57.566	37.284	1.00100.00
ATOM	1391	O	PRO	A	181	-2.605	58.114	36.192	1.00100.00
ATOM	1392	CB	PRO	A	181	-1.014	57.340	39.210	1.00 92.48
ATOM	1393	CG	PRO	A	181	-0.362	58.734	39.152	1.00 98.39
ATOM	1394	CD	PRO	A	181	0.268	58.736	37.663	1.00 94.17
ATOM	1395	N	GLU	A	182	-3.567	57.456	38.141	1.00100.00
ATOM	1396	CA	GLU	A	182	-4.822	58.161	37.876	1.00 98.21
ATOM	1397	C	GLU	A	182	-5.359	58.856	39.154	1.00100.00
ATOM	1398	O	GLU	A	182	-6.404	59.497	39.167	1.00 99.44
ATOM	1399	CB	GLU	A	182	-5.854	57.142	37.356	1.00 98.57
ATOM	1400	CG	GLU	A	182	-5.880	57.077	35.816	1.00100.00
ATOM	1401	CD	GLU	A	182	-7.013	57.938	35.300	1.00100.00
ATOM	1402	OE1	GLU	A	182	-7.817	58.385	36.105	1.00100.00
ATOM	1403	OE2	GLU	A	182	-7.084	58.153	34.091	1.00100.00
ATOM	1404	N	ASP	A	183	-4.607	58.672	40.265	1.00 98.63
ATOM	1405	CA	ASP	A	183	-5.021	59.257	41.552	1.00 97.49
ATOM	1406	C	ASP	A	183	-4.126	60.472	41.932	1.00100.00
ATOM	1407	O	ASP	A	183	-3.464	61.061	41.079	1.00100.00
ATOM	1408	CB	ASP	A	183	-4.946	58.144	42.619	1.00 98.36
ATOM	1409	CG	ASP	A	183	-3.612	57.409	42.547	1.00100.00
ATOM	1410	OD1	ASP	A	183	-3.471	56.556	41.668	1.00100.00
ATOM	1411	OD2	ASP	A	183	-2.741	57.688	43.364	1.00100.00

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ATOM   1412  N   PRO A 184      -4.187  60.906  43.237  1.00 97.96
ATOM   1413  CA  PRO A 184      -3.311  61.985  43.738  1.00 97.92
ATOM   1414  C   PRO A 184      -1.865  61.528  44.071  1.00 97.89
ATOM   1415  O   PRO A 184      -1.348  61.748  45.159  1.00100.00
ATOM   1416  CB  PRO A 184      -3.973  62.561  44.992  1.00 98.86
ATOM   1417  CG  PRO A 184      -5.262  61.777  45.284  1.00100.00
ATOM   1418  CD  PRO A 184      -5.122  60.532  44.284  1.00 97.20
ATOM   1419  N   SER A 185      -1.249  60.840  43.071  1.00 82.40
ATOM   1420  CA  SER A 185       0.196  60.496  43.086  1.00 75.26
ATOM   1421  C   SER A 185       0.748  60.563  41.623  1.00 71.84
ATOM   1422  O   SER A 185      -0.006  60.525  40.670  1.00 77.97
ATOM   1423  CB  SER A 185       0.337  59.068  43.636  1.00 73.41
ATOM   1424  OG  SER A 185       0.672  59.109  45.027  1.00 63.60
ATOM   1425  N   ARG A 186       2.107  60.704  41.461  1.00 57.89
ATOM   1426  CA  ARG A 186       2.650  60.971  40.088  1.00 56.00
ATOM   1427  C   ARG A 186       3.725  59.943  39.633  1.00 59.64
ATOM   1428  O   ARG A 186       4.473  60.157  38.688  1.00 60.30
ATOM   1429  CB  ARG A 186       3.258  62.393  40.064  1.00 63.74
ATOM   1430  CG  ARG A 186       2.339  63.457  40.677  1.00 80.44
ATOM   1431  CD  ARG A 186       1.188  63.874  39.736  1.00 71.31
ATOM   1432  NE  ARG A 186       1.316  63.215  38.436  1.00 79.64
ATOM   1433  CZ  ARG A 186       0.185  62.862  37.784  1.00 95.30
ATOM   1434  NH1 ARG A 186      -0.999  63.109  38.312  1.00 56.25
ATOM   1435  NH2 ARG A 186       0.276  62.232  36.603  1.00 89.98
ATOM   1436  N   LYS A 187       3.892  58.778  40.265  1.00 54.50
ATOM   1437  CA  LYS A 187       4.891  57.805  39.851  1.00 51.93
ATOM   1438  C   LYS A 187       4.506  56.436  40.276  1.00 52.96
ATOM   1439  O   LYS A 187       3.971  56.236  41.368  1.00 53.58
ATOM   1440  CB  LYS A 187       6.247  58.047  40.470  1.00 53.78
ATOM   1441  CG  LYS A 187       7.427  57.714  39.574  1.00 43.05
ATOM   1442  CD  LYS A 187       8.517  58.761  39.762  1.00 53.36
ATOM   1443  CE  LYS A 187       9.870  58.468  39.146  1.00 39.68
ATOM   1444  NZ  LYS A 187      10.795  59.601  39.341  1.00 40.19
ATOM   1445  N   ILE A 188       4.819  55.502  39.403  1.00 46.36
ATOM   1446  CA  ILE A 188       4.565  54.128  39.700  1.00 43.57
ATOM   1447  C   ILE A 188       5.824  53.311  39.851  1.00 42.64
ATOM   1448  O   ILE A 188       6.647  53.189  38.937  1.00 41.55
ATOM   1449  CB  ILE A 188       3.579  53.425  38.826  1.00 45.64
ATOM   1450  CG1 ILE A 188       2.193  54.021  39.047  1.00 45.82
ATOM   1451  CG2 ILE A 188       3.590  51.969  39.273  1.00 43.43
ATOM   1452  CD1 ILE A 188       1.448  53.505  40.276  1.00 62.08
ATOM   1453  N   TYR A 189       5.950  52.757  41.042  1.00 35.58
ATOM   1454  CA  TYR A 189       7.079  51.933  41.356  1.00 37.57
ATOM   1455  C   TYR A 189       6.652  50.465  41.359  1.00 44.89
ATOM   1456  O   TYR A 189       5.656  50.092  41.999  1.00 44.33
ATOM   1457  CB  TYR A 189       7.752  52.392  42.661  1.00 37.85
ATOM   1458  CG  TYR A 189       8.692  53.563  42.456  1.00 34.49
ATOM   1459  CD1 TYR A 189       9.968  53.375  41.930  1.00 35.93
ATOM   1460  CD2 TYR A 189       8.310  54.859  42.813  1.00 32.44
ATOM   1461  CE1 TYR A 189      10.843  54.449  41.753  1.00 36.88
ATOM   1462  CE2 TYR A 189       9.170  55.945  42.647  1.00 31.63
ATOM   1463  CZ  TYR A 189      10.441  55.734  42.113  1.00 44.54
ATOM   1464  OH  TYR A 189      11.296  56.788  41.929  1.00 57.77
ATOM   1465  N   LYS A 190       7.413  49.651  40.608  1.00 42.91
ATOM   1466  CA  LYS A 190       7.173  48.210  40.420  1.00 42.22
ATOM   1467  C   LYS A 190       8.152  47.262  41.143  1.00 40.73
ATOM   1468  O   LYS A 190       9.398  47.400  41.093  1.00 35.69
ATOM   1469  CB  LYS A 190       7.007  47.839  38.944  1.00 45.87
ATOM   1470  CG  LYS A 190       5.735  48.403  38.306  1.00 71.08
ATOM   1471  CD  LYS A 190       5.758  48.384  36.779  1.00 84.62
ATOM   1472  CE  LYS A 190       4.386  48.157  36.147  1.00100.00
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ATOM	1473	NZ	LYS	A	190	4.299	46.930	35.329	1.00	100.00
ATOM	1474	N	PHE	A	191	7.539	46.264	41.812	1.00	35.01
ATOM	1475	CA	PHE	A	191	8.276	45.304	42.592	1.00	31.57
ATOM	1476	C	PHE	A	191	7.792	43.871	42.465	1.00	30.89
ATOM	1477	O	PHE	A	191	6.603	43.584	42.377	1.00	25.06
ATOM	1478	CB	PHE	A	191	8.217	45.734	44.080	1.00	32.11
ATOM	1479	CG	PHE	A	191	8.570	47.190	44.372	1.00	29.24
ATOM	1480	CD1	PHE	A	191	9.895	47.593	44.539	1.00	31.81
ATOM	1481	CD2	PHE	A	191	7.565	48.147	44.508	1.00	30.17
ATOM	1482	CE1	PHE	A	191	10.230	48.925	44.805	1.00	34.10
ATOM	1483	CE2	PHE	A	191	7.866	49.483	44.776	1.00	33.69
ATOM	1484	CZ	PHE	A	191	9.201	49.860	44.928	1.00	33.32
ATOM	1485	N	ILE	A	192	8.764	42.961	42.505	1.00	35.75
ATOM	1486	CA	ILE	A	192	8.525	41.520	42.415	1.00	37.02
ATOM	1487	C	ILE	A	192	9.255	40.653	43.469	1.00	33.05
ATOM	1488	O	ILE	A	192	10.489	40.672	43.593	1.00	30.73
ATOM	1489	CB	ILE	A	192	8.850	40.970	41.025	1.00	42.45
ATOM	1490	CG1	ILE	A	192	8.289	41.914	39.981	1.00	46.39
ATOM	1491	CG2	ILE	A	192	8.251	39.567	40.859	1.00	44.02
ATOM	1492	CD1	ILE	A	192	7.609	41.231	38.798	1.00	69.61
ATOM	1493	N	GLN	A	193	8.459	39.864	44.195	1.00	27.51
ATOM	1494	CA	GLN	A	193	8.954	38.908	45.177	1.00	32.05
ATOM	1495	C	GLN	A	193	8.626	37.488	44.757	1.00	44.32
ATOM	1496	O	GLN	A	193	7.583	36.926	45.120	1.00	43.11
ATOM	1497	CB	GLN	A	193	8.502	39.100	46.638	1.00	33.44
ATOM	1498	CG	GLN	A	193	9.285	38.203	47.632	1.00	22.34
ATOM	1499	CD	GLN	A	193	10.824	38.337	47.636	1.00	48.52
ATOM	1500	OE1	GLN	A	193	11.557	37.537	47.016	1.00	45.24
ATOM	1501	NE2	GLN	A	193	11.326	39.330	48.373	1.00	24.82
ATOM	1502	N	LYS	A	194	9.543	36.908	43.993	1.00	46.91
ATOM	1503	CA	LYS	A	194	9.384	35.540	43.529	1.00	47.56
ATOM	1504	C	LYS	A	194	9.456	34.524	44.666	1.00	49.56
ATOM	1505	O	LYS	A	194	8.777	33.520	44.598	1.00	50.85
ATOM	1506	CB	LYS	A	194	10.385	35.159	42.439	1.00	48.11
ATOM	1507	CG	LYS	A	194	9.884	35.443	41.031	1.00	55.70
ATOM	1508	CD	LYS	A	194	10.895	36.200	40.179	1.00	67.67
ATOM	1509	CE	LYS	A	194	10.614	36.122	38.682	1.00	81.92
ATOM	1510	NZ	LYS	A	194	11.284	37.185	37.910	1.00	88.34
ATOM	1511	N	VAL	A	195	10.308	34.753	45.689	1.00	39.55
ATOM	1512	CA	VAL	A	195	10.422	33.780	46.764	1.00	33.56
ATOM	1513	C	VAL	A	195	9.261	33.862	47.698	1.00	35.67
ATOM	1514	O	VAL	A	195	8.804	34.945	48.034	1.00	38.69
ATOM	1515	CB	VAL	A	195	11.716	33.844	47.560	1.00	32.62
ATOM	1516	CG1	VAL	A	195	11.849	32.539	48.310	1.00	32.40
ATOM	1517	CG2	VAL	A	195	12.933	34.029	46.667	1.00	30.55
ATOM	1518	N	PRO	A	196	8.770	32.717	48.126	1.00	27.75
ATOM	1519	CA	PRO	A	196	7.653	32.757	49.038	1.00	26.18
ATOM	1520	C	PRO	A	196	8.132	33.236	50.410	1.00	35.86
ATOM	1521	O	PRO	A	196	9.185	32.809	50.899	1.00	35.43
ATOM	1522	CB	PRO	A	196	7.022	31.359	49.044	1.00	26.04
ATOM	1523	CG	PRO	A	196	7.856	30.472	48.113	1.00	27.79
ATOM	1524	CD	PRO	A	196	8.964	31.352	47.546	1.00	25.40
ATOM	1525	N	ILE	A	197	7.388	34.171	51.009	1.00	29.92
ATOM	1526	CA	ILE	A	197	7.772	34.697	52.284	1.00	26.98
ATOM	1527	C	ILE	A	197	6.544	34.809	53.128	1.00	34.88
ATOM	1528	O	ILE	A	197	5.444	34.788	52.606	1.00	29.68
ATOM	1529	CB	ILE	A	197	8.334	36.100	52.094	1.00	27.90
ATOM	1530	CG1	ILE	A	197	7.342	36.867	51.254	1.00	27.78
ATOM	1531	CG2	ILE	A	197	9.659	36.091	51.337	1.00	28.12
ATOM	1532	CD1	ILE	A	197	7.494	38.378	51.438	1.00	19.03
ATOM	1533	N	PRO	A	198	6.743	34.936	54.447	1.00	36.02

ATOM 1534 CA PRO A 198 5.647 35.110 55.410 1.00 31.31
ATOM 1535 C PRO A 198 5.299 36.583 55.308 1.00 28.27
ATOM 1536 O PRO A 198 6.212 37.391 55.115 1.00 22.70
ATOM 1537 CB PRO A 198 6.252 34.849 56.794 1.00 31.17
ATOM 1538 CG PRO A 198 7.768 34.768 56.615 1.00 34.94
ATOM 1539 CD PRO A 198 8.057 34.706 55.122 1.00 32.99
ATOM 1540 N CYS A 199 4.011 36.939 55.405 1.00 27.60
ATOM 1541 CA CYS A 199 3.555 38.360 55.289 1.00 27.66
ATOM 1542 C CYS A 199 4.255 39.390 56.187 1.00 30.13
ATOM 1543 O CYS A 199 4.294 40.596 55.895 1.00 29.50
ATOM 1544 CB CYS A 199 2.025 38.534 55.242 1.00 27.18
ATOM 1545 SG CYS A 199 1.232 38.279 56.841 1.00 30.85
ATOM 1546 N TYR A 200 4.847 38.903 57.270 1.00 26.15
ATOM 1547 CA TYR A 200 5.538 39.798 58.123 1.00 28.28
ATOM 1548 C TYR A 200 6.760 40.395 57.483 1.00 32.29
ATOM 1549 O TYR A 200 7.359 41.286 58.036 1.00 31.56
ATOM 1550 CB TYR A 200 5.844 39.215 59.489 1.00 30.59
ATOM 1551 CG TYR A 200 6.989 38.272 59.568 1.00 28.28
ATOM 1552 CD1 TYR A 200 8.288 38.733 59.689 1.00 29.48
ATOM 1553 CD2 TYR A 200 6.756 36.903 59.475 1.00 27.55
ATOM 1554 CE1 TYR A 200 9.377 37.862 59.825 1.00 21.42
ATOM 1555 CE2 TYR A 200 7.838 36.015 59.595 1.00 27.41
ATOM 1556 CZ TYR A 200 9.144 36.488 59.737 1.00 25.11
ATOM 1557 OH TYR A 200 10.215 35.614 59.880 1.00 27.62
ATOM 1558 N LEU A 201 7.113 39.897 56.313 1.00 31.66
ATOM 1559 CA LEU A 201 8.278 40.378 55.579 1.00 29.49
ATOM 1560 C LEU A 201 7.914 41.343 54.484 1.00 33.65
ATOM 1561 O LEU A 201 8.767 41.737 53.686 1.00 35.31
ATOM 1562 CB LEU A 201 9.225 39.275 55.035 1.00 27.04
ATOM 1563 CG LEU A 201 9.697 38.271 56.071 1.00 27.42
ATOM 1564 CD1 LEU A 201 10.254 37.030 55.390 1.00 23.71
ATOM 1565 CD2 LEU A 201 10.764 38.913 56.957 1.00 30.55
ATOM 1566 N ILE A 202 6.648 41.710 54.438 1.00 28.66
ATOM 1567 CA ILE A 202 6.249 42.674 53.433 1.00 29.57
ATOM 1568 C ILE A 202 6.636 44.074 53.951 1.00 40.28
ATOM 1569 O ILE A 202 6.192 44.493 55.027 1.00 40.75
ATOM 1570 CB ILE A 202 4.733 42.651 53.182 1.00 31.18
ATOM 1571 CG1 ILE A 202 4.250 41.429 52.405 1.00 28.21
ATOM 1572 CG2 ILE A 202 4.259 43.962 52.521 1.00 29.23
ATOM 1573 CD1 ILE A 202 2.724 41.288 52.449 1.00 23.01
ATOM 1574 N ALA A 203 7.445 44.813 53.197 1.00 39.14
ATOM 1575 CA ALA A 203 7.840 46.150 53.611 1.00 37.03
ATOM 1576 C ALA A 203 7.819 47.159 52.482 1.00 34.32
ATOM 1577 O ALA A 203 8.060 46.836 51.311 1.00 30.63
ATOM 1578 CB ALA A 203 9.180 46.143 54.309 1.00 38.22
ATOM 1579 N LEU A 204 7.514 48.388 52.910 1.00 33.64
ATOM 1580 CA LEU A 204 7.388 49.604 52.102 1.00 32.56
ATOM 1581 C LEU A 204 7.993 50.817 52.812 1.00 37.69
ATOM 1582 O LEU A 204 7.854 51.037 54.034 1.00 32.66
ATOM 1583 CB LEU A 204 5.906 49.929 51.718 1.00 29.74
ATOM 1584 CG LEU A 204 5.706 51.182 50.855 1.00 29.64
ATOM 1585 CD1 LEU A 204 6.263 50.994 49.445 1.00 29.47
ATOM 1586 CD2 LEU A 204 4.222 51.515 50.750 1.00 33.50
ATOM 1587 N VAL A 205 8.670 51.603 51.991 1.00 36.87
ATOM 1588 CA VAL A 205 9.305 52.821 52.415 1.00 35.15
ATOM 1589 C VAL A 205 9.224 53.795 51.284 1.00 38.41
ATOM 1590 O VAL A 205 9.575 53.462 50.148 1.00 39.50
ATOM 1591 CB VAL A 205 10.769 52.651 52.804 1.00 36.06
ATOM 1592 CG1 VAL A 205 11.466 51.794 51.757 1.00 35.08
ATOM 1593 CG2 VAL A 205 11.432 54.020 52.833 1.00 35.98
ATOM 1594 N VAL A 206 8.750 54.983 51.623 1.00 33.54

ATOM 1595 CA VAL A 206 8.623 56.104 50.687 1.00 31.81
ATOM 1596 C VAL A 206 9.300 57.343 51.249 1.00 31.62
ATOM 1597 O VAL A 206 9.076 57.722 52.406 1.00 34.81
ATOM 1598 CB VAL A 206 7.179 56.405 50.305 1.00 33.35
ATOM 1599 CG1 VAL A 206 7.129 57.243 49.029 1.00 33.44
ATOM 1600 CG2 VAL A 206 6.452 55.084 50.109 1.00 31.98
ATOM 1601 N GLY A 207 10.130 57.959 50.431 1.00 24.94
ATOM 1602 CA GLY A 207 10.807 59.168 50.861 1.00 27.25
ATOM 1603 C GLY A 207 11.802 59.632 49.838 1.00 38.81
ATOM 1604 O GLY A 207 12.046 58.966 48.840 1.00 39.82
ATOM 1605 N ALA A 208 12.375 60.783 50.113 1.00 41.07
ATOM 1606 CA ALA A 208 13.370 61.354 49.233 1.00 42.72
ATOM 1607 C ALA A 208 14.660 60.550 49.356 1.00 49.10
ATOM 1608 O ALA A 208 15.651 60.997 49.957 1.00 51.30
ATOM 1609 CB ALA A 208 13.605 62.810 49.589 1.00 42.95
ATOM 1610 N LEU A 209 14.623 59.350 48.773 1.00 40.92
ATOM 1611 CA LEU A 209 15.739 58.440 48.825 1.00 39.55
ATOM 1612 C LEU A 209 16.756 58.575 47.743 1.00 47.96
ATOM 1613 O LEU A 209 16.420 58.843 46.597 1.00 49.44
ATOM 1614 CB LEU A 209 15.269 56.994 48.894 1.00 37.97
ATOM 1615 CG LEU A 209 14.420 56.803 50.129 1.00 40.46
ATOM 1616 CD1 LEU A 209 13.713 55.469 50.075 1.00 36.99
ATOM 1617 CD2 LEU A 209 15.283 56.921 51.387 1.00 43.31
ATOM 1618 N GLU A 210 17.999 58.317 48.182 1.00 42.68
ATOM 1619 CA GLU A 210 19.205 58.311 47.381 1.00 40.30
ATOM 1620 C GLU A 210 19.965 57.056 47.693 1.00 47.51
ATOM 1621 O GLU A 210 19.708 56.432 48.721 1.00 47.89
ATOM 1622 CB GLU A 210 20.084 59.553 47.613 1.00 42.01
ATOM 1623 CG GLU A 210 19.699 60.734 46.697 1.00 58.26
ATOM 1624 CD GLU A 210 20.524 61.970 46.897 1.00100.00
ATOM 1625 OE1 GLU A 210 21.629 61.968 47.451 1.00 95.26
ATOM 1626 OE2 GLU A 210 19.935 63.047 46.486 1.00100.00
ATOM 1627 N SER A 211 20.895 56.662 46.805 1.00 45.01
ATOM 1628 CA SER A 211 21.661 55.442 47.013 1.00 42.25
ATOM 1629 C SER A 211 23.143 55.535 46.667 1.00 43.37
ATOM 1630 O SER A 211 23.649 56.493 46.086 1.00 46.43
ATOM 1631 CB SER A 211 21.025 54.233 46.346 1.00 44.33
ATOM 1632 OG SER A 211 21.274 54.244 44.934 1.00 54.15
ATOM 1633 N ARG A 212 23.829 54.497 47.053 1.00 34.85
ATOM 1634 CA ARG A 212 25.229 54.328 46.791 1.00 35.41
ATOM 1635 C ARG A 212 25.430 52.838 46.567 1.00 45.39
ATOM 1636 O ARG A 212 24.840 52.027 47.276 1.00 48.85
ATOM 1637 CB ARG A 212 26.101 54.846 47.915 1.00 37.25
ATOM 1638 CG ARG A 212 27.151 55.827 47.402 1.00 68.10
ATOM 1639 CD ARG A 212 26.532 56.962 46.587 1.00 76.55
ATOM 1640 NE ARG A 212 26.695 58.307 47.148 1.00 55.19
ATOM 1641 CZ ARG A 212 25.845 59.301 46.867 1.00 70.87
ATOM 1642 NH1 ARG A 212 24.806 59.105 46.059 1.00 35.71
ATOM 1643 NH2 ARG A 212 26.032 60.516 47.392 1.00 73.35
ATOM 1644 N GLN A 213 26.210 52.442 45.567 1.00 40.74
ATOM 1645 CA GLN A 213 26.408 51.021 45.331 1.00 39.90
ATOM 1646 C GLN A 213 27.646 50.537 46.050 1.00 46.34
ATOM 1647 O GLN A 213 28.740 50.981 45.741 1.00 53.77
ATOM 1648 CB GLN A 213 26.545 50.741 43.846 1.00 40.99
ATOM 1649 CG GLN A 213 26.976 49.296 43.532 1.00 55.79
ATOM 1650 CD GLN A 213 26.292 48.743 42.301 1.00 76.04
ATOM 1651 OE1 GLN A 213 26.275 47.523 42.102 1.00 86.66
ATOM 1652 NE2 GLN A 213 25.700 49.618 41.489 1.00 55.45
ATOM 1653 N ILE A 214 27.495 49.649 47.013 1.00 33.12
ATOM 1654 CA ILE A 214 28.663 49.206 47.743 1.00 32.55
ATOM 1655 C ILE A 214 28.911 47.765 47.536 1.00 39.29

ATOM 1656 O ILE A 214 29.726 47.162 48.230 1.00 42.41
ATOM 1657 CB ILE A 214 28.546 49.428 49.250 1.00 35.72
ATOM 1658 CG1 ILE A 214 27.395 48.573 49.791 1.00 36.13
ATOM 1659 CG2 ILE A 214 28.344 50.911 49.598 1.00 35.79
ATOM 1660 CD1 ILE A 214 27.067 48.841 51.260 1.00 46.69
ATOM 1661 N GLY A 215 28.199 47.197 46.598 1.00 35.02
ATOM 1662 CA GLY A 215 28.638 45.855 46.234 1.00 34.88
ATOM 1663 C GLY A 215 27.970 45.405 44.950 1.00 41.09
ATOM 1664 O GLY A 215 27.083 46.048 44.425 1.00 44.25
ATOM 1665 N PRO A 216 28.448 44.262 44.410 1.00 39.62
ATOM 1666 CA PRO A 216 27.890 43.720 43.197 1.00 39.69
ATOM 1667 C PRO A 216 26.369 43.661 43.253 1.00 41.56
ATOM 1668 O PRO A 216 25.655 43.817 42.240 1.00 44.35
ATOM 1669 CB PRO A 216 28.448 42.311 42.996 1.00 39.91
ATOM 1670 CG PRO A 216 29.377 41.993 44.164 1.00 41.54
ATOM 1671 CD PRO A 216 29.514 43.411 44.897 1.00 37.70
ATOM 1672 N ARG A 217 25.846 43.398 44.477 1.00 31.04
ATOM 1673 CA ARG A 217 24.421 43.328 44.652 1.00 29.22
ATOM 1674 C ARG A 217 23.928 44.109 45.872 1.00 38.24
ATOM 1675 O ARG A 217 22.861 43.885 46.368 1.00 40.69
ATOM 1676 CB ARG A 217 24.012 41.844 44.790 1.00 22.75
ATOM 1677 CG ARG A 217 25.221 40.963 45.109 1.00 40.77
ATOM 1678 CD ARG A 217 24.828 39.774 45.985 1.00 34.08
ATOM 1679 NE ARG A 217 26.020 39.183 46.581 1.00 45.20
ATOM 1680 CZ ARG A 217 25.955 37.894 46.911 1.00 65.13
ATOM 1681 NH1 ARG A 217 24.832 37.220 46.716 1.00 42.40
ATOM 1682 NH2 ARG A 217 26.997 37.300 47.472 1.00 48.08
ATOM 1683 N THR A 218 24.784 45.022 46.404 1.00 31.00
ATOM 1684 CA THR A 218 24.309 45.886 47.487 1.00 31.00
ATOM 1685 C THR A 218 24.128 47.319 47.021 1.00 43.60
ATOM 1686 O THR A 218 25.065 47.930 46.512 1.00 48.42
ATOM 1687 CB THR A 218 25.315 45.845 48.640 1.00 36.95
ATOM 1688 OG1 THR A 218 25.430 44.517 49.139 1.00 45.66
ATOM 1689 CG2 THR A 218 24.826 46.751 49.766 1.00 34.17
ATOM 1690 N LEU A 219 23.099 48.018 47.431 1.00 39.19
ATOM 1691 CA LEU A 219 23.055 49.452 47.315 1.00 38.18
ATOM 1692 C LEU A 219 22.713 50.000 48.695 1.00 42.32
ATOM 1693 O LEU A 219 22.108 49.289 49.498 1.00 43.67
ATOM 1694 CB LEU A 219 21.927 49.841 46.356 1.00 37.05
ATOM 1695 CG LEU A 219 22.386 50.657 45.168 1.00 39.31
ATOM 1696 CD1 LEU A 219 23.670 50.064 44.613 1.00 40.57
ATOM 1697 CD2 LEU A 219 21.283 50.619 44.131 1.00 29.39
ATOM 1698 N VAL A 220 23.066 51.241 48.976 1.00 35.01
ATOM 1699 CA VAL A 220 22.741 51.830 50.253 1.00 36.98
ATOM 1700 C VAL A 220 21.736 52.923 50.043 1.00 44.08
ATOM 1701 O VAL A 220 21.959 53.835 49.256 1.00 46.60
ATOM 1702 CB VAL A 220 23.965 52.346 51.028 1.00 44.95
ATOM 1703 CG1 VAL A 220 23.675 52.428 52.516 1.00 43.16
ATOM 1704 CG2 VAL A 220 25.138 51.382 50.828 1.00 47.70
ATOM 1705 N TRP A 221 20.622 52.818 50.731 1.00 41.98
ATOM 1706 CA TRP A 221 19.605 53.828 50.602 1.00 41.64
ATOM 1707 C TRP A 221 19.464 54.612 51.872 1.00 42.40
ATOM 1708 O TRP A 221 19.461 54.060 52.960 1.00 45.56
ATOM 1709 CB TRP A 221 18.256 53.245 50.186 1.00 41.24
ATOM 1710 CG TRP A 221 18.353 52.459 48.918 1.00 42.59
ATOM 1711 CD1 TRP A 221 18.888 51.225 48.793 1.00 45.35
ATOM 1712 CD2 TRP A 221 17.949 52.873 47.590 1.00 41.62
ATOM 1713 NE1 TRP A 221 18.826 50.832 47.478 1.00 44.74
ATOM 1714 CE2 TRP A 221 18.243 51.821 46.720 1.00 45.31
ATOM 1715 CE3 TRP A 221 17.345 54.009 47.061 1.00 41.17
ATOM 1716 CZ2 TRP A 221 17.958 51.902 45.346 1.00 42.60

ATOM 1717 CZ3 TRP A 221 17.054 54.083 45.710 1.00 39.08
ATOM 1718 CH2 TRP A 221 17.360 53.040 44.864 1.00 38.48
ATOM 1719 N SER A 222 19.271 55.896 51.688 1.00 37.01
ATOM 1720 CA SER A 222 19.017 56.846 52.748 1.00 38.05
ATOM 1721 C SER A 222 18.853 58.251 52.205 1.00 45.28
ATOM 1722 O SER A 222 19.005 58.503 51.008 1.00 44.02
ATOM 1723 CB SER A 222 20.098 56.816 53.820 1.00 39.07
ATOM 1724 OG SER A 222 21.322 57.149 53.229 1.00 42.36
ATOM 1725 N GLU A 223 18.586 59.190 53.088 1.00 40.91
ATOM 1726 CA GLU A 223 18.465 60.527 52.584 1.00 41.97
ATOM 1727 C GLU A 223 19.843 61.042 52.234 1.00 50.17
ATOM 1728 O GLU A 223 20.829 60.701 52.863 1.00 52.02
ATOM 1729 CB GLU A 223 17.856 61.483 53.597 1.00 43.06
ATOM 1730 CG GLU A 223 16.364 61.262 53.861 1.00 51.71
ATOM 1731 CD GLU A 223 15.799 62.478 54.545 1.00 84.51
ATOM 1732 OE1 GLU A 223 15.905 63.610 54.085 1.00 56.82
ATOM 1733 OE2 GLU A 223 15.244 62.222 55.705 1.00 88.87
ATOM 1734 N LYS A 224 19.892 61.875 51.229 1.00 47.39
ATOM 1735 CA LYS A 224 21.139 62.456 50.792 1.00 48.51
ATOM 1736 C LYS A 224 22.163 62.683 51.930 1.00 50.90
ATOM 1737 O LYS A 224 23.382 62.569 51.736 1.00 51.55
ATOM 1738 CB LYS A 224 20.843 63.736 49.986 1.00 51.58
ATOM 1739 CG LYS A 224 22.039 64.648 49.723 1.00 81.16
ATOM 1740 CD LYS A 224 21.954 65.397 48.392 1.00 97.82
ATOM 1741 CE LYS A 224 21.646 66.891 48.530 1.00100.00
ATOM 1742 NZ LYS A 224 22.056 67.700 47.362 1.00100.00
ATOM 1743 N GLU A 225 21.683 63.011 53.123 1.00 45.77
ATOM 1744 CA GLU A 225 22.607 63.309 54.199 1.00 46.00
ATOM 1745 C GLU A 225 23.227 62.150 54.902 1.00 47.99
ATOM 1746 O GLU A 225 24.107 62.354 55.732 1.00 47.21
ATOM 1747 CB GLU A 225 22.057 64.296 55.210 1.00 47.71
ATOM 1748 CG GLU A 225 20.530 64.296 55.182 1.00 63.24
ATOM 1749 CD GLU A 225 19.931 65.219 54.150 1.00 75.13
ATOM 1750 OE1 GLU A 225 20.187 66.420 54.046 1.00 54.64
ATOM 1751 OE2 GLU A 225 19.039 64.578 53.420 1.00 49.64
ATOM 1752 N GLN A 226 22.798 60.949 54.564 1.00 43.92
ATOM 1753 CA GLN A 226 23.340 59.772 55.224 1.00 43.91
ATOM 1754 C GLN A 226 24.036 58.756 54.322 1.00 45.86
ATOM 1755 O GLN A 226 24.756 57.871 54.806 1.00 45.70
ATOM 1756 CB GLN A 226 22.252 59.084 56.063 1.00 45.27
ATOM 1757 CG GLN A 226 21.965 59.790 57.400 1.00 31.17
ATOM 1758 CD GLN A 226 21.297 61.155 57.302 1.00 44.48
ATOM 1759 OE1 GLN A 226 21.823 62.149 57.820 1.00 37.36
ATOM 1760 NE2 GLN A 226 20.115 61.202 56.696 1.00 30.28
ATOM 1761 N VAL A 227 23.814 58.871 53.021 1.00 41.20
ATOM 1762 CA VAL A 227 24.406 57.947 52.071 1.00 43.13
ATOM 1763 C VAL A 227 25.884 57.670 52.261 1.00 50.55
ATOM 1764 O VAL A 227 26.298 56.518 52.480 1.00 53.01
ATOM 1765 CB VAL A 227 24.155 58.293 50.604 1.00 49.39
ATOM 1766 CG1 VAL A 227 24.319 57.029 49.771 1.00 48.89
ATOM 1767 CG2 VAL A 227 22.752 58.851 50.421 1.00 50.47
ATOM 1768 N GLU A 228 26.696 58.718 52.170 1.00 44.08
ATOM 1769 CA GLU A 228 28.123 58.542 52.310 1.00 41.71
ATOM 1770 C GLU A 228 28.514 57.871 53.583 1.00 44.20
ATOM 1771 O GLU A 228 29.227 56.868 53.589 1.00 44.88
ATOM 1772 CB GLU A 228 28.935 59.824 52.102 1.00 43.08
ATOM 1773 CG GLU A 228 29.153 60.161 50.611 1.00 64.74
ATOM 1774 CD GLU A 228 29.114 58.965 49.701 1.00 84.29
ATOM 1775 OE1 GLU A 228 29.975 58.107 49.685 1.00 84.36
ATOM 1776 OE2 GLU A 228 28.064 58.951 48.917 1.00 73.81
ATOM 1777 N LYS A 229 28.066 58.423 54.685 1.00 39.79

ATOM 1778 CA LYS A 229 28.449 57.796 55.922 1.00 39.04
ATOM 1779 C LYS A 229 27.949 56.375 55.930 1.00 40.38
ATOM 1780 O LYS A 229 28.639 55.433 56.346 1.00 43.63
ATOM 1781 CB LYS A 229 28.129 58.585 57.187 1.00 39.79
ATOM 1782 CG LYS A 229 28.903 58.072 58.394 1.00 63.75
ATOM 1783 CD LYS A 229 28.498 58.763 59.685 1.00 77.46
ATOM 1784 CE LYS A 229 29.677 59.084 60.593 1.00 94.73
ATOM 1785 NZ LYS A 229 30.344 60.353 60.256 1.00100.00
ATOM 1786 N SER A 230 26.741 56.220 55.428 1.00 28.48
ATOM 1787 CA SER A 230 26.174 54.891 55.377 1.00 25.93
ATOM 1788 C SER A 230 27.089 53.988 54.587 1.00 30.26
ATOM 1789 O SER A 230 27.469 52.855 54.955 1.00 28.48
ATOM 1790 CB SER A 230 24.824 54.927 54.694 1.00 30.08
ATOM 1791 OG SER A 230 23.822 55.293 55.605 1.00 41.60
ATOM 1792 N ALA A 231 27.436 54.536 53.459 1.00 31.13
ATOM 1793 CA ALA A 231 28.288 53.820 52.593 1.00 36.66
ATOM 1794 C ALA A 231 29.597 53.383 53.270 1.00 47.68
ATOM 1795 O ALA A 231 30.003 52.238 53.103 1.00 54.59
ATOM 1796 CB ALA A 231 28.406 54.518 51.257 1.00 38.49
ATOM 1797 N TYR A 232 30.256 54.246 54.060 1.00 40.77
ATOM 1798 CA TYR A 232 31.500 53.830 54.730 1.00 38.40
ATOM 1799 C TYR A 232 31.265 52.721 55.753 1.00 39.70
ATOM 1800 O TYR A 232 32.041 51.772 55.862 1.00 36.46
ATOM 1801 CB TYR A 232 32.311 54.981 55.414 1.00 38.27
ATOM 1802 CG TYR A 232 33.497 54.525 56.303 1.00 42.36
ATOM 1803 CD1 TYR A 232 34.755 54.238 55.753 1.00 46.41
ATOM 1804 CD2 TYR A 232 33.373 54.394 57.691 1.00 40.99
ATOM 1805 CE1 TYR A 232 35.835 53.815 56.534 1.00 47.23
ATOM 1806 CE2 TYR A 232 34.441 53.979 58.496 1.00 40.10
ATOM 1807 CZ TYR A 232 35.680 53.695 57.916 1.00 48.59
ATOM 1808 OH TYR A 232 36.734 53.282 58.698 1.00 51.92
ATOM 1809 N GLU A 233 30.191 52.883 56.519 1.00 35.75
ATOM 1810 CA GLU A 233 29.835 51.984 57.606 1.00 34.55
ATOM 1811 C GLU A 233 29.633 50.498 57.252 1.00 38.39
ATOM 1812 O GLU A 233 30.152 49.576 57.892 1.00 38.55
ATOM 1813 CB GLU A 233 28.673 52.623 58.414 1.00 34.48
ATOM 1814 CG GLU A 233 28.666 52.262 59.912 1.00 24.95
ATOM 1815 CD GLU A 233 29.463 53.183 60.787 1.00 37.55
ATOM 1816 OE1 GLU A 233 29.408 54.410 60.741 1.00 55.33
ATOM 1817 OE2 GLU A 233 30.216 52.518 61.619 1.00 40.65
ATOM 1818 N PHE A 234 28.867 50.282 56.202 1.00 33.02
ATOM 1819 CA PHE A 234 28.493 48.974 55.719 1.00 29.90
ATOM 1820 C PHE A 234 29.341 48.398 54.592 1.00 34.69
ATOM 1821 O PHE A 234 28.883 47.521 53.823 1.00 34.21
ATOM 1822 CB PHE A 234 27.020 49.081 55.293 1.00 30.23
ATOM 1823 CG PHE A 234 26.215 49.752 56.394 1.00 30.32
ATOM 1824 CD1 PHE A 234 26.518 49.521 57.739 1.00 31.50
ATOM 1825 CD2 PHE A 234 25.151 50.605 56.102 1.00 28.66
ATOM 1826 CE1 PHE A 234 25.780 50.103 58.772 1.00 30.43
ATOM 1827 CE2 PHE A 234 24.407 51.203 57.121 1.00 29.60
ATOM 1828 CZ PHE A 234 24.725 50.959 58.458 1.00 27.47
ATOM 1829 N SER A 235 30.571 48.874 54.476 1.00 29.55
ATOM 1830 CA SER A 235 31.428 48.366 53.412 1.00 28.64
ATOM 1831 C SER A 235 31.387 46.858 53.338 1.00 30.38
ATOM 1832 O SER A 235 31.166 46.252 52.282 1.00 32.37
ATOM 1833 CB SER A 235 32.861 48.787 53.604 1.00 31.15
ATOM 1834 OG SER A 235 33.028 49.368 54.873 1.00 39.32
ATOM 1835 N GLU A 236 31.698 46.299 54.504 1.00 22.49
ATOM 1836 CA GLU A 236 31.815 44.873 54.737 1.00 23.79
ATOM 1837 C GLU A 236 30.627 43.992 54.380 1.00 32.37
ATOM 1838 O GLU A 236 30.697 42.772 54.545 1.00 29.91

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ATOM   1839  CB  GLU A 236      32.305  44.529  56.134  1.00 24.06
ATOM   1840  CG  GLU A 236      33.491  45.403  56.585  1.00 22.96
ATOM   1841  CD  GLU A 236      33.600  45.492  58.090  1.00 66.18
ATOM   1842  OE1 GLU A 236      32.633  45.482  58.849  1.00 37.01
ATOM   1843  OE2 GLU A 236      34.848  45.518  58.494  1.00 78.68
ATOM   1844  N   THR A 237      29.560  44.593  53.891  1.00 34.11
ATOM   1845  CA  THR A 237      28.384  43.823  53.539  1.00 33.69
ATOM   1846  C   THR A 237      28.644  42.609  52.644  1.00 33.33
ATOM   1847  O   THR A 237      28.517  41.451  53.048  1.00 31.09
ATOM   1848  CB  THR A 237      27.218  44.710  53.057  1.00 37.99
ATOM   1849  OG1 THR A 237      26.899  45.675  54.048  1.00 33.49
ATOM   1850  CG2 THR A 237      25.995  43.862  52.744  1.00 25.66
ATOM   1851  N   GLU A 238      29.020  42.854  51.409  1.00 29.69
ATOM   1852  CA  GLU A 238      29.267  41.734  50.520  1.00 27.05
ATOM   1853  C   GLU A 238      30.071  40.638  51.146  1.00 33.17
ATOM   1854  O   GLU A 238      29.660  39.497  51.055  1.00 38.50
ATOM   1855  CB  GLU A 238      29.851  42.080  49.161  1.00 27.50
ATOM   1856  CG  GLU A 238      30.116  40.813  48.320  1.00 18.83
ATOM   1857  CD  GLU A 238      28.902  40.297  47.596  1.00 41.67
ATOM   1858  OE1 GLU A 238      27.848  40.909  47.464  1.00 33.59
ATOM   1859  OE2 GLU A 238      29.085  39.089  47.138  1.00 46.30
ATOM   1860  N   SER A 239      31.203  40.973  51.772  1.00 24.44
ATOM   1861  CA  SER A 239      32.045  39.957  52.387  1.00 24.60
ATOM   1862  C   SER A 239      31.245  39.060  53.344  1.00 35.72
ATOM   1863  O   SER A 239      31.379  37.830  53.360  1.00 35.25
ATOM   1864  CB  SER A 239      33.231  40.601  53.074  1.00 29.14
ATOM   1865  OG  SER A 239      32.747  41.590  53.961  1.00 54.60
ATOM   1866  N   MET A 240      30.382  39.703  54.154  1.00 33.13
ATOM   1867  CA  MET A 240      29.529  38.993  55.091  1.00 28.55
ATOM   1868  C   MET A 240      28.603  38.075  54.325  1.00 35.65
ATOM   1869  O   MET A 240      28.435  36.926  54.689  1.00 35.99
ATOM   1870  CB  MET A 240      28.736  39.945  55.993  1.00 26.50
ATOM   1871  CG  MET A 240      29.691  40.675  56.910  1.00 27.57
ATOM   1872  SD  MET A 240      28.871  41.986  57.833  1.00 32.91
ATOM   1873  CE  MET A 240      30.040  42.085  59.183  1.00 28.47
ATOM   1874  N   LEU A 241      28.019  38.603  53.243  1.00 32.77
ATOM   1875  CA  LEU A 241      27.120  37.859  52.381  1.00 29.87
ATOM   1876  C   LEU A 241      27.848  36.615  51.878  1.00 36.76
ATOM   1877  O   LEU A 241      27.302  35.509  51.858  1.00 36.97
ATOM   1878  CB  LEU A 241      26.715  38.753  51.196  1.00 29.71
ATOM   1879  CG  LEU A 241      25.283  39.289  51.237  1.00 37.68
ATOM   1880  CD1 LEU A 241      25.174  40.552  50.389  1.00 35.76
ATOM   1881  CD2 LEU A 241      24.309  38.257  50.673  1.00 45.60
ATOM   1882  N   LYS A 242      29.114  36.806  51.468  1.00 34.76
ATOM   1883  CA  LYS A 242      29.908  35.702  50.972  1.00 33.62
ATOM   1884  C   LYS A 242      30.072  34.690  52.039  1.00 32.18
ATOM   1885  O   LYS A 242      29.887  33.512  51.795  1.00 32.56
ATOM   1886  CB  LYS A 242      31.292  36.069  50.468  1.00 38.43
ATOM   1887  CG  LYS A 242      31.406  36.263  48.961  1.00 49.23
ATOM   1888  CD  LYS A 242      31.160  37.721  48.536  1.00 88.36
ATOM   1889  CE  LYS A 242      32.371  38.456  47.943  1.00100.00
ATOM   1890  NZ  LYS A 242      32.033  39.411  46.862  1.00100.00
ATOM   1891  N   ILE A 243      30.428  35.154  53.227  1.00 30.87
ATOM   1892  CA  ILE A 243      30.627  34.229  54.359  1.00 31.70
ATOM   1893  C   ILE A 243      29.381  33.458  54.764  1.00 36.50
ATOM   1894  O   ILE A 243      29.458  32.303  55.119  1.00 39.33
ATOM   1895  CB  ILE A 243      31.227  34.886  55.579  1.00 32.36
ATOM   1896  CG1 ILE A 243      32.630  35.337  55.222  1.00 32.09
ATOM   1897  CG2 ILE A 243      31.243  33.891  56.718  1.00 28.26
ATOM   1898  CD1 ILE A 243      33.035  36.578  55.981  1.00 20.09
ATOM   1899  N   ALA A 244      28.237  34.120  54.708  1.00 32.10
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ATOM	1900	CA	ALA	A	244	26.968	33.519	55.066	1.00	32.95
ATOM	1901	C	ALA	A	244	26.600	32.392	54.127	1.00	36.35
ATOM	1902	O	ALA	A	244	26.074	31.358	54.546	1.00	36.88
ATOM	1903	CB	ALA	A	244	25.858	34.576	55.123	1.00	34.02
ATOM	1904	N	GLU	A	245	26.890	32.617	52.846	1.00	31.20
ATOM	1905	CA	GLU	A	245	26.614	31.635	51.818	1.00	29.26
ATOM	1906	C	GLU	A	245	27.360	30.354	52.092	1.00	35.18
ATOM	1907	O	GLU	A	245	26.849	29.276	51.800	1.00	36.21
ATOM	1908	CB	GLU	A	245	26.908	32.177	50.421	1.00	30.22
ATOM	1909	CG	GLU	A	245	25.701	32.938	49.842	1.00	39.79
ATOM	1910	CD	GLU	A	245	26.026	33.564	48.529	1.00	51.91
ATOM	1911	OE1	GLU	A	245	26.945	34.351	48.358	1.00	34.19
ATOM	1912	OE2	GLU	A	245	25.246	33.142	47.585	1.00	47.48
ATOM	1913	N	ASP	A	246	28.570	30.484	52.680	1.00	32.29
ATOM	1914	CA	ASP	A	246	29.417	29.350	53.033	1.00	30.70
ATOM	1915	C	ASP	A	246	28.848	28.645	54.230	1.00	35.47
ATOM	1916	O	ASP	A	246	28.881	27.417	54.347	1.00	37.08
ATOM	1917	CB	ASP	A	246	30.873	29.717	53.355	1.00	33.17
ATOM	1918	CG	ASP	A	246	31.709	28.473	53.413	1.00	64.49
ATOM	1919	OD1	ASP	A	246	31.934	27.789	52.437	1.00	67.15
ATOM	1920	OD2	ASP	A	246	32.118	28.167	54.622	1.00	79.01
ATOM	1921	N	LEU	A	247	28.323	29.434	55.134	1.00	33.59
ATOM	1922	CA	LEU	A	247	27.731	28.868	56.334	1.00	36.70
ATOM	1923	C	LEU	A	247	26.355	28.208	56.083	1.00	35.92
ATOM	1924	O	LEU	A	247	26.060	27.110	56.551	1.00	30.77
ATOM	1925	CB	LEU	A	247	27.562	29.954	57.435	1.00	38.34
ATOM	1926	CG	LEU	A	247	28.732	30.100	58.394	1.00	44.30
ATOM	1927	CD1	LEU	A	247	29.341	28.738	58.641	1.00	48.20
ATOM	1928	CD2	LEU	A	247	29.779	31.013	57.815	1.00	35.25
ATOM	1929	N	GLY	A	248	25.471	28.887	55.353	1.00	34.97
ATOM	1930	CA	GLY	A	248	24.160	28.315	55.181	1.00	36.00
ATOM	1931	C	GLY	A	248	23.754	27.976	53.778	1.00	37.99
ATOM	1932	O	GLY	A	248	22.637	27.524	53.526	1.00	38.13
ATOM	1933	N	GLY	A	249	24.637	28.158	52.849	1.00	30.74
ATOM	1934	CA	GLY	A	249	24.203	27.852	51.526	1.00	30.15
ATOM	1935	C	GLY	A	249	23.918	29.131	50.759	1.00	38.91
ATOM	1936	O	GLY	A	249	24.126	30.240	51.238	1.00	41.32
ATOM	1937	N	PRO	A	250	23.453	28.946	49.547	1.00	38.93
ATOM	1938	CA	PRO	A	250	23.173	30.021	48.639	1.00	38.03
ATOM	1939	C	PRO	A	250	22.203	31.078	49.096	1.00	42.17
ATOM	1940	O	PRO	A	250	21.258	30.823	49.840	1.00	45.20
ATOM	1941	CB	PRO	A	250	22.663	29.357	47.352	1.00	39.18
ATOM	1942	CG	PRO	A	250	22.952	27.864	47.436	1.00	41.01
ATOM	1943	CD	PRO	A	250	23.396	27.610	48.865	1.00	38.57
ATOM	1944	N	TYR	A	251	22.486	32.275	48.600	1.00	35.37
ATOM	1945	CA	TYR	A	251	21.692	33.461	48.817	1.00	34.87
ATOM	1946	C	TYR	A	251	20.740	33.479	47.649	1.00	39.55
ATOM	1947	O	TYR	A	251	21.125	33.794	46.535	1.00	42.57
ATOM	1948	CB	TYR	A	251	22.540	34.759	48.790	1.00	35.07
ATOM	1949	CG	TYR	A	251	21.711	35.980	49.119	1.00	35.25
ATOM	1950	CD1	TYR	A	251	21.341	36.229	50.441	1.00	33.14
ATOM	1951	CD2	TYR	A	251	21.260	36.846	48.121	1.00	37.98
ATOM	1952	CE1	TYR	A	251	20.575	37.341	50.781	1.00	28.05
ATOM	1953	CE2	TYR	A	251	20.492	37.967	48.443	1.00	40.05
ATOM	1954	CZ	TYR	A	251	20.160	38.213	49.777	1.00	42.84
ATOM	1955	OH	TYR	A	251	19.409	39.307	50.112	1.00	39.70
ATOM	1956	N	VAL	A	252	19.510	33.102	47.914	1.00	32.21
ATOM	1957	CA	VAL	A	252	18.495	33.003	46.899	1.00	30.05
ATOM	1958	C	VAL	A	252	17.708	34.279	46.631	1.00	38.47
ATOM	1959	O	VAL	A	252	17.000	34.340	45.640	1.00	40.65
ATOM	1960	CB	VAL	A	252	17.560	31.845	47.253	1.00	31.27

ATOM 1961 CG1 VAL A 252 18.378 30.605 47.643 1.00 28.15
ATOM 1962 CG2 VAL A 252 16.614 32.234 48.405 1.00 30.93
ATOM 1963 N TRP A 253 17.800 35.292 47.504 1.00 32.44
ATOM 1964 CA TRP A 253 17.041 36.509 47.309 1.00 30.93
ATOM 1965 C TRP A 253 17.468 37.341 46.119 1.00 43.56
ATOM 1966 O TRP A 253 16.690 38.119 45.568 1.00 46.70
ATOM 1967 CB TRP A 253 16.898 37.302 48.606 1.00 29.65
ATOM 1968 CG TRP A 253 16.364 36.369 49.625 1.00 30.19
ATOM 1969 CD1 TRP A 253 17.086 35.546 50.413 1.00 32.81
ATOM 1970 CD2 TRP A 253 14.989 36.110 49.913 1.00 29.63
ATOM 1971 NE1 TRP A 253 16.251 34.794 51.194 1.00 30.69
ATOM 1972 CE2 TRP A 253 14.955 35.128 50.912 1.00 31.50
ATOM 1973 CE3 TRP A 253 13.789 36.637 49.450 1.00 30.18
ATOM 1974 CZ2 TRP A 253 13.746 34.657 51.433 1.00 30.31
ATOM 1975 CZ3 TRP A 253 12.600 36.164 49.958 1.00 31.14
ATOM 1976 CH2 TRP A 253 12.579 35.176 50.946 1.00 31.37
ATOM 1977 N GLY A 254 18.697 37.182 45.675 1.00 42.35
ATOM 1978 CA GLY A 254 19.101 37.944 44.509 1.00 41.34
ATOM 1979 C GLY A 254 19.875 39.192 44.858 1.00 45.47
ATOM 1980 O GLY A 254 21.079 39.236 44.671 1.00 45.89
ATOM 1981 N GLN A 255 19.160 40.210 45.351 1.00 41.86
ATOM 1982 CA GLN A 255 19.746 41.488 45.675 1.00 38.67
ATOM 1983 C GLN A 255 19.576 41.776 47.153 1.00 40.18
ATOM 1984 O GLN A 255 18.494 41.811 47.659 1.00 38.67
ATOM 1985 CB GLN A 255 19.023 42.552 44.836 1.00 37.82
ATOM 1986 CG GLN A 255 19.455 43.979 45.169 1.00 50.17
ATOM 1987 CD GLN A 255 20.618 44.368 44.283 1.00 62.88
ATOM 1988 OE1 GLN A 255 21.104 43.612 43.463 1.00 55.76
ATOM 1989 NE2 GLN A 255 21.057 45.625 44.479 1.00 34.97
ATOM 1990 N TYR A 256 20.716 41.900 47.866 1.00 33.01
ATOM 1991 CA TYR A 256 20.651 42.361 49.258 1.00 28.69
ATOM 1992 C TYR A 256 20.891 43.854 49.329 1.00 26.72
ATOM 1993 O TYR A 256 21.963 44.321 49.225 1.00 24.22
ATOM 1994 CB TYR A 256 21.743 41.629 50.075 1.00 29.99
ATOM 1995 CG TYR A 256 21.567 41.867 51.556 1.00 35.47
ATOM 1996 CD1 TYR A 256 20.582 41.200 52.250 1.00 35.76
ATOM 1997 CD2 TYR A 256 22.405 42.746 52.239 1.00 37.52
ATOM 1998 CE1 TYR A 256 20.436 41.396 53.599 1.00 25.80
ATOM 1999 CE2 TYR A 256 22.255 42.946 53.588 1.00 39.10
ATOM 2000 CZ TYR A 256 21.283 42.275 54.268 1.00 31.78
ATOM 2001 OH TYR A 256 21.153 42.433 55.631 1.00 37.35
ATOM 2002 N ASP A 257 19.834 44.613 49.463 1.00 23.26
ATOM 2003 CA ASP A 257 20.077 46.027 49.621 1.00 23.47
ATOM 2004 C ASP A 257 19.977 46.444 51.071 1.00 35.90
ATOM 2005 O ASP A 257 19.729 45.661 51.967 1.00 39.48
ATOM 2006 CB ASP A 257 19.073 46.803 48.758 1.00 24.13
ATOM 2007 CG ASP A 257 19.689 47.030 47.388 1.00 38.50
ATOM 2008 OD1 ASP A 257 20.843 46.675 47.220 1.00 42.61
ATOM 2009 OD2 ASP A 257 19.020 47.555 46.517 1.00 29.02
ATOM 2010 N LEU A 258 20.370 47.661 51.386 1.00 30.86
ATOM 2011 CA LEU A 258 20.306 48.159 52.735 1.00 27.50
ATOM 2012 C LEU A 258 19.526 49.466 52.765 1.00 36.37
ATOM 2013 O LEU A 258 19.620 50.302 51.840 1.00 37.98
ATOM 2014 CB LEU A 258 21.727 48.442 53.274 1.00 24.71
ATOM 2015 CG LEU A 258 22.552 47.191 53.491 1.00 31.13
ATOM 2016 CD1 LEU A 258 23.913 47.567 54.043 1.00 30.89
ATOM 2017 CD2 LEU A 258 21.854 46.282 54.500 1.00 33.65
ATOM 2018 N LEU A 259 18.762 49.632 53.838 1.00 29.87
ATOM 2019 CA LEU A 259 18.006 50.849 54.052 1.00 28.43
ATOM 2020 C LEU A 259 18.283 51.453 55.446 1.00 31.30
ATOM 2021 O LEU A 259 18.055 50.819 56.477 1.00 31.19

ATOM 2022 CB LEU A 259 16.500 50.809 53.693 1.00 27.63
ATOM 2023 CG LEU A 259 15.706 51.980 54.298 1.00 31.51
ATOM 2024 CD1 LEU A 259 16.026 53.300 53.605 1.00 32.32
ATOM 2025 CD2 LEU A 259 14.212 51.731 54.253 1.00 26.87
ATOM 2026 N VAL A 260 18.807 52.683 55.447 1.00 25.88
ATOM 2027 CA VAL A 260 19.105 53.435 56.638 1.00 25.99
ATOM 2028 C VAL A 260 17.896 54.336 56.796 1.00 34.83
ATOM 2029 O VAL A 260 17.647 55.187 55.959 1.00 41.92
ATOM 2030 CB VAL A 260 20.390 54.234 56.408 1.00 29.97
ATOM 2031 CG1 VAL A 260 20.701 55.179 57.592 1.00 32.08
ATOM 2032 CG2 VAL A 260 21.563 53.295 56.130 1.00 26.15
ATOM 2033 N LEU A 261 17.098 54.120 57.815 1.00 28.41
ATOM 2034 CA LEU A 261 15.865 54.878 58.024 1.00 25.52
ATOM 2035 C LEU A 261 16.016 56.054 58.948 1.00 29.42
ATOM 2036 O LEU A 261 17.090 56.300 59.489 1.00 29.96
ATOM 2037 CB LEU A 261 14.874 53.921 58.706 1.00 25.70
ATOM 2038 CG LEU A 261 14.387 52.877 57.740 1.00 33.14
ATOM 2039 CD1 LEU A 261 15.161 51.571 57.929 1.00 32.73
ATOM 2040 CD2 LEU A 261 12.900 52.686 57.935 1.00 43.74
ATOM 2041 N PRO A 262 14.903 56.758 59.142 1.00 28.52
ATOM 2042 CA PRO A 262 14.894 57.870 60.047 1.00 28.50
ATOM 2043 C PRO A 262 15.152 57.294 61.432 1.00 35.36
ATOM 2044 O PRO A 262 14.866 56.124 61.683 1.00 34.52
ATOM 2045 CB PRO A 262 13.512 58.512 59.971 1.00 29.19
ATOM 2046 CG PRO A 262 12.707 57.719 58.964 1.00 34.34
ATOM 2047 CD PRO A 262 13.581 56.575 58.492 1.00 30.63
ATOM 2048 N PRO A 263 15.706 58.105 62.327 1.00 31.50
ATOM 2049 CA PRO A 263 16.060 57.657 63.673 1.00 28.77
ATOM 2050 C PRO A 263 14.966 57.021 64.493 1.00 29.15
ATOM 2051 O PRO A 263 15.256 56.335 65.434 1.00 26.36
ATOM 2052 CB PRO A 263 16.652 58.867 64.392 1.00 29.16
ATOM 2053 CG PRO A 263 16.851 59.954 63.335 1.00 31.55
ATOM 2054 CD PRO A 263 15.994 59.558 62.138 1.00 29.17
ATOM 2055 N SER A 264 13.712 57.258 64.143 1.00 33.87
ATOM 2056 CA SER A 264 12.578 56.703 64.864 1.00 33.81
ATOM 2057 C SER A 264 12.403 55.223 64.604 1.00 37.36
ATOM 2058 O SER A 264 11.529 54.570 65.201 1.00 39.61
ATOM 2059 CB SER A 264 11.280 57.423 64.576 1.00 35.61
ATOM 2060 OG SER A 264 10.955 57.276 63.201 1.00 53.45
ATOM 2061 N PHE A 265 13.213 54.684 63.710 1.00 29.00
ATOM 2062 CA PHE A 265 13.136 53.256 63.453 1.00 28.56
ATOM 2063 C PHE A 265 13.260 52.491 64.787 1.00 28.49
ATOM 2064 O PHE A 265 14.208 52.675 65.533 1.00 27.36
ATOM 2065 CB PHE A 265 14.200 52.833 62.454 1.00 31.40
ATOM 2066 CG PHE A 265 13.875 51.458 62.028 1.00 34.51
ATOM 2067 CD1 PHE A 265 12.601 51.174 61.543 1.00 35.11
ATOM 2068 CD2 PHE A 265 14.814 50.435 62.156 1.00 38.94
ATOM 2069 CE1 PHE A 265 12.282 49.876 61.154 1.00 37.42
ATOM 2070 CE2 PHE A 265 14.511 49.131 61.772 1.00 42.65
ATOM 2071 CZ PHE A 265 13.236 48.860 61.274 1.00 40.14
ATOM 2072 N PRO A 266 12.272 51.650 65.128 1.00 24.06
ATOM 2073 CA PRO A 266 12.249 50.945 66.419 1.00 20.62
ATOM 2074 C PRO A 266 13.231 49.794 66.701 1.00 29.34
ATOM 2075 O PRO A 266 13.343 49.364 67.847 1.00 28.17
ATOM 2076 CB PRO A 266 10.808 50.463 66.593 1.00 19.16
ATOM 2077 CG PRO A 266 10.076 50.686 65.281 1.00 21.07
ATOM 2078 CD PRO A 266 11.046 51.355 64.325 1.00 19.44
ATOM 2079 N TYR A 267 13.922 49.280 65.676 1.00 27.23
ATOM 2080 CA TYR A 267 14.849 48.160 65.817 1.00 25.74
ATOM 2081 C TYR A 267 16.181 48.454 65.189 1.00 32.57
ATOM 2082 O TYR A 267 16.281 49.316 64.324 1.00 32.48

ATOM 2083 CB TYR A 267 14.298 46.903 65.121 1.00 25.07
ATOM 2084 CG TYR A 267 12.968 46.502 65.674 1.00 24.45
ATOM 2085 CD1 TYR A 267 12.915 45.765 66.856 1.00 27.05
ATOM 2086 CD2 TYR A 267 11.776 46.851 65.037 1.00 22.15
ATOM 2087 CE1 TYR A 267 11.697 45.387 67.419 1.00 25.01
ATOM 2088 CE2 TYR A 267 10.548 46.496 65.596 1.00 19.09
ATOM 2089 CZ TYR A 267 10.510 45.767 66.786 1.00 17.98
ATOM 2090 OH TYR A 267 9.302 45.416 67.353 1.00 19.51
ATOM 2091 N GLY A 268 17.196 47.698 65.627 1.00 30.22
ATOM 2092 CA GLY A 268 18.547 47.826 65.114 1.00 27.29
ATOM 2093 C GLY A 268 18.485 47.620 63.614 1.00 29.82
ATOM 2094 O GLY A 268 19.136 48.297 62.836 1.00 32.99
ATOM 2095 N GLY A 269 17.637 46.676 63.228 1.00 23.19
ATOM 2096 CA GLY A 269 17.393 46.320 61.853 1.00 21.62
ATOM 2097 C GLY A 269 16.187 45.402 61.777 1.00 27.53
ATOM 2098 O GLY A 269 15.681 44.948 62.820 1.00 20.14
ATOM 2099 N MET A 270 15.735 45.154 60.528 1.00 27.81
ATOM 2100 CA MET A 270 14.615 44.267 60.176 1.00 25.61
ATOM 2101 C MET A 270 14.956 43.585 58.874 1.00 33.56
ATOM 2102 O MET A 270 15.221 44.247 57.867 1.00 34.67
ATOM 2103 CB MET A 270 13.247 44.936 60.028 1.00 26.07
ATOM 2104 CG MET A 270 12.195 43.937 59.602 1.00 28.81
ATOM 2105 SD MET A 270 11.875 42.742 60.929 1.00 37.39
ATOM 2106 CE MET A 270 10.720 41.621 60.082 1.00 35.30
ATOM 2107 N GLU A 271 14.995 42.263 58.904 1.00 32.20
ATOM 2108 CA GLU A 271 15.393 41.459 57.753 1.00 33.32
ATOM 2109 C GLU A 271 14.419 41.382 56.567 1.00 40.86
ATOM 2110 O GLU A 271 14.087 40.285 56.107 1.00 42.02
ATOM 2111 CB GLU A 271 15.802 40.054 58.230 1.00 35.05
ATOM 2112 CG GLU A 271 14.607 39.218 58.760 1.00 33.55
ATOM 2113 CD GLU A 271 14.291 39.428 60.219 1.00 25.52
ATOM 2114 OE1 GLU A 271 14.586 40.436 60.844 1.00 37.23
ATOM 2115 OE2 GLU A 271 13.699 38.393 60.757 1.00 25.86
ATOM 2116 N ASN A 272 13.978 42.535 56.052 1.00 35.34
ATOM 2117 CA ASN A 272 13.057 42.544 54.928 1.00 33.26
ATOM 2118 C ASN A 272 13.787 42.048 53.702 1.00 34.47
ATOM 2119 O ASN A 272 14.811 42.613 53.351 1.00 33.64
ATOM 2120 CB ASN A 272 12.441 43.947 54.719 1.00 30.65
ATOM 2121 CG ASN A 272 11.667 44.453 55.935 1.00 42.50
ATOM 2122 OD1 ASN A 272 11.908 45.554 56.475 1.00 47.09
ATOM 2123 ND2 ASN A 272 10.716 43.661 56.371 1.00 24.31
ATOM 2124 N PRO A 273 13.281 40.983 53.078 1.00 29.63
ATOM 2125 CA PRO A 273 13.935 40.373 51.910 1.00 28.47
ATOM 2126 C PRO A 273 14.303 41.345 50.819 1.00 30.43
ATOM 2127 O PRO A 273 13.457 42.089 50.372 1.00 31.65
ATOM 2128 CB PRO A 273 12.991 39.305 51.381 1.00 30.16
ATOM 2129 CG PRO A 273 11.829 39.237 52.365 1.00 36.65
ATOM 2130 CD PRO A 273 11.927 40.440 53.310 1.00 30.84
ATOM 2131 N CYS A 274 15.571 41.333 50.431 1.00 27.40
ATOM 2132 CA CYS A 274 16.069 42.206 49.373 1.00 28.17
ATOM 2133 C CYS A 274 16.327 43.604 49.860 1.00 27.35
ATOM 2134 O CYS A 274 17.114 44.345 49.248 1.00 28.53
ATOM 2135 CB CYS A 274 15.121 42.347 48.145 1.00 32.00
ATOM 2136 SG CYS A 274 14.659 40.798 47.340 1.00 38.42
ATOM 2137 N LEU A 275 15.658 43.972 50.947 1.00 26.20
ATOM 2138 CA LEU A 275 15.789 45.315 51.535 1.00 29.54
ATOM 2139 C LEU A 275 15.857 45.279 53.059 1.00 32.52
ATOM 2140 O LEU A 275 14.859 45.250 53.772 1.00 32.44
ATOM 2141 CB LEU A 275 14.657 46.253 51.005 1.00 28.58
ATOM 2142 CG LEU A 275 14.847 47.735 51.239 1.00 26.78
ATOM 2143 CD1 LEU A 275 16.191 48.183 50.698 1.00 21.90

ATOM 2144 CD2 LEU A 275 13.712 48.478 50.554 1.00 31.48
ATOM 2145 N THR A 276 17.062 45.244 53.570 1.00 29.67
ATOM 2146 CA THR A 276 17.225 45.198 54.996 1.00 30.47
ATOM 2147 C THR A 276 17.120 46.624 55.597 1.00 34.60
ATOM 2148 O THR A 276 17.766 47.588 55.129 1.00 31.01
ATOM 2149 CB THR A 276 18.508 44.397 55.387 1.00 30.98
ATOM 2150 OG1 THR A 276 18.224 43.030 55.512 1.00 42.01
ATOM 2151 CG2 THR A 276 19.124 44.835 56.694 1.00 29.43
ATOM 2152 N PHE A 277 16.280 46.759 56.622 1.00 27.69
ATOM 2153 CA PHE A 277 16.164 48.034 57.274 1.00 28.92
ATOM 2154 C PHE A 277 17.184 48.065 58.403 1.00 36.07
ATOM 2155 O PHE A 277 17.337 47.088 59.131 1.00 34.57
ATOM 2156 CB PHE A 277 14.791 48.265 57.901 1.00 30.17
ATOM 2157 CG PHE A 277 13.774 48.458 56.848 1.00 30.72
ATOM 2158 CD1 PHE A 277 14.011 47.966 55.568 1.00 30.73
ATOM 2159 CD2 PHE A 277 12.573 49.114 57.105 1.00 30.61
ATOM 2160 CE1 PHE A 277 13.072 48.135 54.552 1.00 29.30
ATOM 2161 CE2 PHE A 277 11.619 49.276 56.101 1.00 32.26
ATOM 2162 CZ PHE A 277 11.862 48.772 54.824 1.00 27.48
ATOM 2163 N VAL A 278 17.864 49.186 58.562 1.00 32.97
ATOM 2164 CA VAL A 278 18.839 49.338 59.614 1.00 32.66
ATOM 2165 C VAL A 278 18.696 50.698 60.248 1.00 37.01
ATOM 2166 O VAL A 278 18.251 51.635 59.599 1.00 37.16
ATOM 2167 CB VAL A 278 20.246 49.088 59.109 1.00 36.51
ATOM 2168 CG1 VAL A 278 20.173 47.967 58.086 1.00 37.40
ATOM 2169 CG2 VAL A 278 20.791 50.356 58.444 1.00 34.87
ATOM 2170 N THR A 279 19.066 50.778 61.515 1.00 32.36
ATOM 2171 CA THR A 279 18.948 51.994 62.264 1.00 31.03
ATOM 2172 C THR A 279 20.121 52.883 62.035 1.00 37.42
ATOM 2173 O THR A 279 21.243 52.397 61.920 1.00 39.87
ATOM 2174 CB THR A 279 18.885 51.695 63.759 1.00 31.39
ATOM 2175 OG1 THR A 279 19.110 52.895 64.472 1.00 34.21
ATOM 2176 CG2 THR A 279 19.989 50.706 64.083 1.00 23.69
ATOM 2177 N PRO A 280 19.845 54.187 62.000 1.00 30.07
ATOM 2178 CA PRO A 280 20.903 55.132 61.802 1.00 27.00
ATOM 2179 C PRO A 280 21.823 55.110 63.005 1.00 30.60
ATOM 2180 O PRO A 280 22.951 55.588 62.934 1.00 30.20
ATOM 2181 CB PRO A 280 20.249 56.497 61.601 1.00 26.23
ATOM 2182 CG PRO A 280 18.769 56.337 61.889 1.00 28.07
ATOM 2183 CD PRO A 280 18.499 54.848 61.984 1.00 26.11
ATOM 2184 N THR A 281 21.348 54.509 64.112 1.00 27.82
ATOM 2185 CA THR A 281 22.199 54.426 65.302 1.00 27.48
ATOM 2186 C THR A 281 23.372 53.523 65.073 1.00 31.37
ATOM 2187 O THR A 281 24.226 53.385 65.944 1.00 31.93
ATOM 2188 CB THR A 281 21.499 54.016 66.601 1.00 21.45
ATOM 2189 OG1 THR A 281 21.021 52.681 66.524 1.00 33.18
ATOM 2190 CG2 THR A 281 20.388 54.994 66.874 1.00 9.89
ATOM 2191 N LEU A 282 23.378 52.881 63.913 1.00 25.29
ATOM 2192 CA LEU A 282 24.473 51.993 63.586 1.00 24.04
ATOM 2193 C LEU A 282 25.682 52.790 63.049 1.00 34.74
ATOM 2194 O LEU A 282 26.787 52.279 62.884 1.00 34.84
ATOM 2195 CB LEU A 282 24.063 51.038 62.464 1.00 22.14
ATOM 2196 CG LEU A 282 23.104 49.916 62.819 1.00 26.88
ATOM 2197 CD1 LEU A 282 23.312 48.809 61.791 1.00 27.77
ATOM 2198 CD2 LEU A 282 23.322 49.404 64.249 1.00 21.75
ATOM 2199 N LEU A 283 25.465 54.063 62.744 1.00 32.05
ATOM 2200 CA LEU A 283 26.501 54.903 62.159 1.00 31.43
ATOM 2201 C LEU A 283 27.659 55.324 63.055 1.00 41.94
ATOM 2202 O LEU A 283 27.907 56.525 63.196 1.00 49.19
ATOM 2203 CB LEU A 283 25.861 56.117 61.418 1.00 29.55
ATOM 2204 CG LEU A 283 24.720 55.661 60.488 1.00 32.94

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ATOM   2205  CD1 LEU A 283      23.933  56.811  59.869  1.00 33.48
ATOM   2206  CD2 LEU A 283      25.232  54.716  59.409  1.00 28.39
ATOM   2207  N   ALA A 284      28.387  54.370  63.638  1.00 33.18
ATOM   2208  CA  ALA A 284      29.488  54.728  64.532  1.00 30.20
ATOM   2209  C   ALA A 284      30.655  55.492  63.922  1.00 31.97
ATOM   2210  O   ALA A 284      31.411  56.165  64.642  1.00 31.40
ATOM   2211  CB  ALA A 284      29.973  53.544  65.336  1.00 29.60
ATOM   2212  N   GLY A 285      30.801  55.371  62.605  1.00 27.10
ATOM   2213  CA  GLY A 285      31.882  56.018  61.867  1.00 29.77
ATOM   2214  C   GLY A 285      33.174  55.194  61.910  1.00 39.25
ATOM   2215  O   GLY A 285      34.264  55.649  61.544  1.00 41.21
ATOM   2216  N   ASP A 286      33.022  53.951  62.363  1.00 34.57
ATOM   2217  CA  ASP A 286      34.144  53.057  62.473  1.00 32.57
ATOM   2218  C   ASP A 286      33.805  51.625  62.130  1.00 31.59
ATOM   2219  O   ASP A 286      34.609  50.743  62.325  1.00 29.27
ATOM   2220  CB  ASP A 286      34.812  53.163  63.860  1.00 34.65
ATOM   2221  CG  ASP A 286      34.081  52.447  64.945  1.00 41.93
ATOM   2222  OD1 ASP A 286      33.008  51.893  64.765  1.00 45.21
ATOM   2223  OD2 ASP A 286      34.714  52.492  66.087  1.00 35.67
ATOM   2224  N   LYS A 287      32.590  51.395  61.641  1.00 29.46
ATOM   2225  CA  LYS A 287      32.199  50.038  61.272  1.00 31.62
ATOM   2226  C   LYS A 287      31.976  49.060  62.437  1.00 37.91
ATOM   2227  O   LYS A 287      31.761  47.879  62.240  1.00 37.91
ATOM   2228  CB  LYS A 287      33.215  49.447  60.304  1.00 32.17
ATOM   2229  CG  LYS A 287      33.510  50.358  59.119  1.00 51.60
ATOM   2230  CD  LYS A 287      33.960  49.601  57.877  1.00 50.74
ATOM   2231  CE  LYS A 287      35.290  50.105  57.328  1.00 63.80
ATOM   2232  NZ  LYS A 287      35.167  50.866  56.069  1.00 71.91
ATOM   2233  N   SER A 288      32.168  49.575  63.647  1.00 31.58
ATOM   2234  CA  SER A 288      32.079  48.737  64.810  1.00 27.15
ATOM   2235  C   SER A 288      30.742  48.137  65.142  1.00 36.08
ATOM   2236  O   SER A 288      30.676  47.318  66.057  1.00 37.87
ATOM   2237  CB  SER A 288      32.618  49.463  66.005  1.00 16.31
ATOM   2238  OG  SER A 288      31.659  50.443  66.312  1.00 29.71
ATOM   2239  N   LEU A 289      29.669  48.529  64.460  1.00 29.34
ATOM   2240  CA  LEU A 289      28.351  47.979  64.794  1.00 24.70
ATOM   2241  C   LEU A 289      27.792  47.105  63.686  1.00 32.97
ATOM   2242  O   LEU A 289      26.591  46.766  63.648  1.00 30.35
ATOM   2243  CB  LEU A 289      27.385  49.090  65.191  1.00 21.45
ATOM   2244  CG  LEU A 289      27.954  49.887  66.347  1.00 22.99
ATOM   2245  CD1 LEU A 289      26.881  50.769  66.950  1.00 20.66
ATOM   2246  CD2 LEU A 289      28.381  48.881  67.394  1.00 29.65
ATOM   2247  N   SER A 290      28.723  46.753  62.801  1.00 31.21
ATOM   2248  CA  SER A 290      28.453  45.941  61.645  1.00 29.89
ATOM   2249  C   SER A 290      27.861  44.582  62.006  1.00 30.57
ATOM   2250  O   SER A 290      27.299  43.872  61.153  1.00 29.73
ATOM   2251  CB  SER A 290      29.704  45.800  60.783  1.00 29.27
ATOM   2252  OG  SER A 290      30.470  44.725  61.266  1.00 38.77
ATOM   2253  N   ASN A 291      27.980  44.207  63.282  1.00 26.55
ATOM   2254  CA  ASN A 291      27.449  42.909  63.706  1.00 25.78
ATOM   2255  C   ASN A 291      26.006  42.773  63.355  1.00 30.89
ATOM   2256  O   ASN A 291      25.576  41.702  62.975  1.00 29.73
ATOM   2257  CB  ASN A 291      27.725  42.503  65.157  1.00 28.48
ATOM   2258  CG  ASN A 291      26.910  43.313  66.119  1.00 33.33
ATOM   2259  OD1 ASN A 291      27.065  44.529  66.198  1.00 34.48
ATOM   2260  ND2 ASN A 291      26.001  42.653  66.818  1.00 28.96
ATOM   2261  N   VAL A 292      25.277  43.885  63.476  1.00 30.68
ATOM   2262  CA  VAL A 292      23.865  43.924  63.142  1.00 30.27
ATOM   2263  C   VAL A 292      23.667  43.619  61.669  1.00 32.61
ATOM   2264  O   VAL A 292      22.644  43.082  61.255  1.00 33.31
ATOM   2265  CB  VAL A 292      23.288  45.289  63.505  1.00 35.13
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ATOM 2266 CG1 VAL A 292 21.877 45.486 62.946 1.00 33.48
ATOM 2267 CG2 VAL A 292 23.328 45.478 65.014 1.00 35.02
ATOM 2268 N ILE A 293 24.653 43.975 60.861 1.00 27.92
ATOM 2269 CA ILE A 293 24.527 43.685 59.461 1.00 28.71
ATOM 2270 C ILE A 293 24.658 42.159 59.296 1.00 35.03
ATOM 2271 O ILE A 293 23.860 41.475 58.624 1.00 38.34
ATOM 2272 CB ILE A 293 25.554 44.438 58.606 1.00 33.84
ATOM 2273 CG1 ILE A 293 25.608 45.952 58.898 1.00 34.55
ATOM 2274 CG2 ILE A 293 25.305 44.186 57.121 1.00 36.50
ATOM 2275 CD1 ILE A 293 24.265 46.680 58.808 1.00 30.49
ATOM 2276 N ALA A 294 25.668 41.584 59.934 1.00 23.76
ATOM 2277 CA ALA A 294 25.836 40.138 59.809 1.00 19.95
ATOM 2278 C ALA A 294 24.559 39.409 60.165 1.00 27.33
ATOM 2279 O ALA A 294 24.183 38.422 59.505 1.00 25.48
ATOM 2280 CB ALA A 294 26.984 39.644 60.688 1.00 19.24
ATOM 2281 N HIS A 295 23.917 39.934 61.244 1.00 27.63
ATOM 2282 CA HIS A 295 22.666 39.414 61.797 1.00 26.83
ATOM 2283 C HIS A 295 21.611 39.383 60.734 1.00 28.61
ATOM 2284 O HIS A 295 21.169 38.301 60.348 1.00 25.72
ATOM 2285 CB HIS A 295 22.148 40.175 63.028 1.00 27.98
ATOM 2286 CG HIS A 295 20.937 39.534 63.657 1.00 31.62
ATOM 2287 ND1 HIS A 295 21.047 38.675 64.763 1.00 32.66
ATOM 2288 CD2 HIS A 295 19.602 39.643 63.338 1.00 30.92
ATOM 2289 CE1 HIS A 295 19.802 38.298 65.088 1.00 30.14
ATOM 2290 NE2 HIS A 295 18.916 38.860 64.254 1.00 30.24
ATOM 2291 N GLU A 296 21.257 40.590 60.251 1.00 27.23
ATOM 2292 CA GLU A 296 20.266 40.749 59.195 1.00 25.98
ATOM 2293 C GLU A 296 20.533 39.790 58.056 1.00 32.73
ATOM 2294 O GLU A 296 19.628 39.081 57.561 1.00 31.88
ATOM 2295 CB GLU A 296 20.046 42.203 58.728 1.00 24.55
ATOM 2296 CG GLU A 296 19.892 43.148 59.936 1.00 23.16
ATOM 2297 CD GLU A 296 18.939 42.632 60.991 1.00 53.50
ATOM 2298 OE1 GLU A 296 17.964 41.956 60.700 1.00 23.99
ATOM 2299 OE2 GLU A 296 19.237 43.006 62.233 1.00 32.77
ATOM 2300 N ILE A 297 21.803 39.745 57.675 1.00 25.37
ATOM 2301 CA ILE A 297 22.195 38.870 56.599 1.00 22.64
ATOM 2302 C ILE A 297 21.812 37.445 56.859 1.00 27.47
ATOM 2303 O ILE A 297 21.175 36.799 56.048 1.00 26.25
ATOM 2304 CB ILE A 297 23.672 38.963 56.302 1.00 24.19
ATOM 2305 CG1 ILE A 297 23.920 40.140 55.355 1.00 25.28
ATOM 2306 CG2 ILE A 297 24.079 37.686 55.626 1.00 20.77
ATOM 2307 CD1 ILE A 297 25.325 40.705 55.435 1.00 16.26
ATOM 2308 N SER A 298 22.226 36.947 58.012 1.00 28.23
ATOM 2309 CA SER A 298 21.939 35.569 58.377 1.00 25.04
ATOM 2310 C SER A 298 20.467 35.235 58.298 1.00 26.21
ATOM 2311 O SER A 298 20.118 34.097 58.000 1.00 26.30
ATOM 2312 CB SER A 298 22.520 35.209 59.714 1.00 27.82
ATOM 2313 OG SER A 298 23.890 35.552 59.714 1.00 35.98
ATOM 2314 N HIS A 299 19.599 36.230 58.562 1.00 22.17
ATOM 2315 CA HIS A 299 18.205 36.092 58.719 1.00 22.77
ATOM 2316 C HIS A 299 17.614 35.710 57.387 1.00 29.10
ATOM 2317 O HIS A 299 16.553 35.162 57.290 1.00 31.50
ATOM 2318 CB HIS A 299 17.662 37.432 59.200 1.00 24.67
ATOM 2319 CG HIS A 299 17.053 37.338 60.602 1.00 29.10
ATOM 2320 ND1 HIS A 299 16.190 36.368 60.975 1.00 30.70
ATOM 2321 CD2 HIS A 299 17.196 38.233 61.667 1.00 32.39
ATOM 2322 CE1 HIS A 299 15.811 36.675 62.233 1.00 30.41
ATOM 2323 NE2 HIS A 299 16.397 37.783 62.674 1.00 31.74
ATOM 2324 N SER A 300 18.356 36.048 56.315 1.00 23.31
ATOM 2325 CA SER A 300 17.942 35.581 55.010 1.00 24.24
ATOM 2326 C SER A 300 17.879 34.050 54.977 1.00 34.13

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ATOM   2327  O   SER A 300      17.075  33.463  54.305  1.00 33.28
ATOM   2328  CB  SER A 300      18.941  36.092  53.965  1.00 27.31
ATOM   2329  OG  SER A 300      18.947  37.519  53.962  1.00 49.96
ATOM   2330  N   TRP A 301      18.773  33.411  55.752  1.00 33.09
ATOM   2331  CA  TRP A 301      18.702  31.969  55.829  1.00 31.84
ATOM   2332  C   TRP A 301      17.740  31.511  56.895  1.00 32.15
ATOM   2333  O   TRP A 301      16.764  30.876  56.620  1.00 27.05
ATOM   2334  CB  TRP A 301      20.095  31.429  56.082  1.00 30.16
ATOM   2335  CG  TRP A 301      20.791  31.421  54.801  1.00 32.02
ATOM   2336  CD1 TRP A 301      20.787  30.393  53.859  1.00 35.05
ATOM   2337  CD2 TRP A 301      21.496  32.520  54.202  1.00 30.84
ATOM   2338  NE1 TRP A 301      21.415  30.732  52.722  1.00 33.29
ATOM   2339  CE2 TRP A 301      21.886  32.112  52.921  1.00 33.44
ATOM   2340  CE3 TRP A 301      21.811  33.790  54.631  1.00 32.65
ATOM   2341  CZ2 TRP A 301      22.577  32.970  52.108  1.00 32.21
ATOM   2342  CZ3 TRP A 301      22.503  34.652  53.812  1.00 36.10
ATOM   2343  CH2 TRP A 301      22.888  34.239  52.544  1.00 36.83
ATOM   2344  N   THR A 302      18.042  31.864  58.146  1.00 31.77
ATOM   2345  CA  THR A 302      17.125  31.488  59.215  1.00 33.55
ATOM   2346  C   THR A 302      16.276  32.690  59.695  1.00 36.35
ATOM   2347  O   THR A 302      16.759  33.590  60.330  1.00 36.56
ATOM   2348  CB  THR A 302      17.963  30.920  60.366  1.00 31.04
ATOM   2349  OG1 THR A 302      19.047  31.807  60.639  1.00 38.50
ATOM   2350  CG2 THR A 302      18.544  29.555  59.967  1.00 17.10
ATOM   2351  N   GLY A 303      15.053  32.418  59.250  1.00 25.28
ATOM   2352  CA  GLY A 303      13.908  33.236  59.483  1.00 21.59
ATOM   2353  C   GLY A 303      13.202  33.382  58.163  1.00 26.99
ATOM   2354  O   GLY A 303      12.040  33.040  57.994  1.00 26.18
ATOM   2355  N   ASN A 304      13.936  33.891  57.195  1.00 28.05
ATOM   2356  CA  ASN A 304      13.363  34.101  55.875  1.00 28.17
ATOM   2357  C   ASN A 304      13.141  32.839  55.056  1.00 28.99
ATOM   2358  O   ASN A 304      12.118  32.715  54.415  1.00 24.87
ATOM   2359  CB  ASN A 304      14.091  35.176  55.047  1.00 23.55
ATOM   2360  CG  ASN A 304      14.133  36.499  55.757  1.00 37.80
ATOM   2361  OD1 ASN A 304      13.630  36.613  56.892  1.00 20.66
ATOM   2362  ND2 ASN A 304      14.752  37.488  55.093  1.00 24.17
ATOM   2363  N   LEU A 305      14.110  31.919  55.055  1.00 27.24
ATOM   2364  CA  LEU A 305      13.987  30.677  54.306  1.00 27.34
ATOM   2365  C   LEU A 305      13.218  29.665  55.121  1.00 31.29
ATOM   2366  O   LEU A 305      12.235  29.051  54.678  1.00 29.23
ATOM   2367  CB  LEU A 305      15.371  30.119  53.967  1.00 27.62
ATOM   2368  CG  LEU A 305      15.805  30.593  52.603  1.00 32.23
ATOM   2369  CD1 LEU A 305      17.289  30.293  52.412  1.00 28.91
ATOM   2370  CD2 LEU A 305      14.951  29.887  51.549  1.00 41.51
ATOM   2371  N   VAL A 306      13.711  29.528  56.347  1.00 27.75
ATOM   2372  CA  VAL A 306      13.134  28.652  57.327  1.00 29.99
ATOM   2373  C   VAL A 306      12.578  29.527  58.403  1.00 31.78
ATOM   2374  O   VAL A 306      13.306  30.217  59.110  1.00 28.32
ATOM   2375  CB  VAL A 306      14.092  27.593  57.827  1.00 37.24
ATOM   2376  CG1 VAL A 306      15.479  28.180  57.969  1.00 38.36
ATOM   2377  CG2 VAL A 306      13.602  27.107  59.164  1.00 37.56
ATOM   2378  N   THR A 307      11.259  29.517  58.440  1.00 29.40
ATOM   2379  CA  THR A 307      10.499  30.358  59.320  1.00 28.14
ATOM   2380  C   THR A 307       9.729  29.712  60.446  1.00 34.06
ATOM   2381  O   THR A 307       9.029  28.706  60.277  1.00 36.72
ATOM   2382  CB  THR A 307       9.474  31.115  58.460  1.00 23.03
ATOM   2383  OG1 THR A 307      10.124  31.811  57.422  1.00 28.56
ATOM   2384  CG2 THR A 307       8.665  32.068  59.336  1.00 12.55
ATOM   2385  N   ASN A 308       9.802  30.347  61.608  1.00 29.29
ATOM   2386  CA  ASN A 308       9.042  29.862  62.724  1.00 27.82
ATOM   2387  C   ASN A 308       7.576  29.716  62.234  1.00 31.42
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ATOM	2388	O	ASN	A	308	7.072	30.535	61.450	1.00	32.96
ATOM	2389	CB	ASN	A	308	9.194	30.790	63.972	1.00	23.57
ATOM	2390	CG	ASN	A	308	8.935	32.298	63.745	1.00	30.38
ATOM	2391	OD1	ASN	A	308	9.505	33.190	64.400	1.00	23.70
ATOM	2392	ND2	ASN	A	308	8.056	32.608	62.818	1.00	41.34
ATOM	2393	N	LYS	A	309	6.890	28.658	62.640	1.00	24.10
ATOM	2394	CA	LYS	A	309	5.502	28.433	62.230	1.00	23.40
ATOM	2395	C	LYS	A	309	4.514	29.380	62.964	1.00	28.17
ATOM	2396	O	LYS	A	309	3.430	29.756	62.474	1.00	22.88
ATOM	2397	CB	LYS	A	309	5.151	26.975	62.459	1.00	24.26
ATOM	2398	CG	LYS	A	309	4.036	26.478	61.555	1.00	28.57
ATOM	2399	CD	LYS	A	309	3.543	25.075	61.924	1.00	38.25
ATOM	2400	CE	LYS	A	309	3.475	24.112	60.739	1.00	78.39
ATOM	2401	NZ	LYS	A	309	4.389	22.953	60.849	1.00	98.22
ATOM	2402	N	THR	A	310	4.917	29.744	64.179	1.00	23.46
ATOM	2403	CA	THR	A	310	4.179	30.616	65.037	1.00	22.98
ATOM	2404	C	THR	A	310	5.142	31.336	65.922	1.00	31.43
ATOM	2405	O	THR	A	310	6.223	30.836	66.230	1.00	31.51
ATOM	2406	CB	THR	A	310	3.104	29.917	65.871	1.00	34.01
ATOM	2407	OG1	THR	A	310	3.684	29.148	66.945	1.00	27.97
ATOM	2408	CG2	THR	A	310	2.174	29.114	64.956	1.00	24.58
ATOM	2409	N	TRP	A	311	4.733	32.527	66.299	1.00	29.82
ATOM	2410	CA	TRP	A	311	5.559	33.371	67.120	1.00	30.49
ATOM	2411	C	TRP	A	311	6.044	32.692	68.381	1.00	26.99
ATOM	2412	O	TRP	A	311	7.015	33.101	68.971	1.00	25.15
ATOM	2413	CB	TRP	A	311	4.933	34.768	67.320	1.00	30.34
ATOM	2414	CG	TRP	A	311	4.706	35.412	66.001	1.00	30.63
ATOM	2415	CD1	TRP	A	311	3.514	35.785	65.490	1.00	32.07
ATOM	2416	CD2	TRP	A	311	5.705	35.723	65.008	1.00	31.31
ATOM	2417	NE1	TRP	A	311	3.703	36.335	64.250	1.00	29.97
ATOM	2418	CE2	TRP	A	311	5.033	36.317	63.931	1.00	32.88
ATOM	2419	CE3	TRP	A	311	7.099	35.586	64.943	1.00	31.44
ATOM	2420	CZ2	TRP	A	311	5.721	36.771	62.804	1.00	31.56
ATOM	2421	CZ3	TRP	A	311	7.779	36.059	63.848	1.00	30.39
ATOM	2422	CH2	TRP	A	311	7.089	36.639	62.789	1.00	30.58
ATOM	2423	N	ASP	A	312	5.366	31.632	68.770	1.00	27.36
ATOM	2424	CA	ASP	A	312	5.757	30.868	69.950	1.00	27.38
ATOM	2425	C	ASP	A	312	7.149	30.213	69.757	1.00	31.25
ATOM	2426	O	ASP	A	312	7.826	29.802	70.718	1.00	27.07
ATOM	2427	CB	ASP	A	312	4.697	29.750	70.217	1.00	25.96
ATOM	2428	CG	ASP	A	312	3.432	30.230	70.872	1.00	27.42
ATOM	2429	OD1	ASP	A	312	3.197	31.396	71.102	1.00	28.97
ATOM	2430	OD2	ASP	A	312	2.623	29.265	71.208	1.00	29.33
ATOM	2431	N	HIS	A	313	7.562	30.089	68.487	1.00	25.04
ATOM	2432	CA	HIS	A	313	8.820	29.454	68.164	1.00	23.48
ATOM	2433	C	HIS	A	313	9.864	30.452	67.737	1.00	25.38
ATOM	2434	O	HIS	A	313	10.929	30.139	67.214	1.00	29.97
ATOM	2435	CB	HIS	A	313	8.588	28.245	67.209	1.00	25.00
ATOM	2436	CG	HIS	A	313	7.641	27.230	67.837	1.00	29.77
ATOM	2437	ND1	HIS	A	313	8.087	26.183	68.635	1.00	31.37
ATOM	2438	CD2	HIS	A	313	6.279	27.152	67.808	1.00	31.31
ATOM	2439	CE1	HIS	A	313	7.015	25.509	69.039	1.00	28.91
ATOM	2440	NE2	HIS	A	313	5.913	26.066	68.559	1.00	29.40
ATOM	2441	N	PHE	A	314	9.521	31.682	68.005	1.00	17.43
ATOM	2442	CA	PHE	A	314	10.345	32.810	67.701	1.00	17.16
ATOM	2443	C	PHE	A	314	11.852	32.523	67.812	1.00	26.01
ATOM	2444	O	PHE	A	314	12.669	32.922	66.963	1.00	30.40
ATOM	2445	CB	PHE	A	314	9.908	34.056	68.517	1.00	18.63
ATOM	2446	CG	PHE	A	314	10.592	35.351	68.113	1.00	20.10
ATOM	2447	CD1	PHE	A	314	10.712	35.697	66.768	1.00	21.80
ATOM	2448	CD2	PHE	A	314	11.129	36.214	69.070	1.00	22.60

ATOM 2449 CE1 PHE A 314 11.337 36.890 66.400 1.00 24.74
ATOM 2450 CE2 PHE A 314 11.750 37.416 68.716 1.00 27.24
ATOM 2451 CZ PHE A 314 11.857 37.756 67.368 1.00 24.97
ATOM 2452 N TRP A 315 12.235 31.828 68.861 1.00 19.66
ATOM 2453 CA TRP A 315 13.639 31.541 69.068 1.00 17.87
ATOM 2454 C TRP A 315 14.292 30.775 67.953 1.00 28.55
ATOM 2455 O TRP A 315 15.518 30.769 67.830 1.00 29.23
ATOM 2456 CB TRP A 315 13.860 30.842 70.362 1.00 16.03
ATOM 2457 CG TRP A 315 13.613 29.408 70.161 1.00 19.64
ATOM 2458 CD1 TRP A 315 12.428 28.787 70.247 1.00 22.39
ATOM 2459 CD2 TRP A 315 14.599 28.430 69.876 1.00 21.70
ATOM 2460 NE1 TRP A 315 12.597 27.457 70.033 1.00 24.22
ATOM 2461 CE2 TRP A 315 13.934 27.205 69.801 1.00 27.96
ATOM 2462 CE3 TRP A 315 15.976 28.481 69.681 1.00 22.89
ATOM 2463 CZ2 TRP A 315 14.631 26.018 69.547 1.00 27.76
ATOM 2464 CZ3 TRP A 315 16.651 27.321 69.421 1.00 23.16
ATOM 2465 CH2 TRP A 315 15.991 26.108 69.341 1.00 23.94
ATOM 2466 N LEU A 316 13.488 30.114 67.144 1.00 26.33
ATOM 2467 CA LEU A 316 14.092 29.400 66.067 1.00 25.44
ATOM 2468 C LEU A 316 14.666 30.443 65.129 1.00 33.21
ATOM 2469 O LEU A 316 15.737 30.252 64.530 1.00 37.80
ATOM 2470 CB LEU A 316 13.050 28.567 65.311 1.00 24.82
ATOM 2471 CG LEU A 316 12.663 27.242 65.956 1.00 27.62
ATOM 2472 CD1 LEU A 316 11.574 26.552 65.106 1.00 22.30
ATOM 2473 CD2 LEU A 316 13.897 26.344 66.097 1.00 27.03
ATOM 2474 N ASN A 317 13.931 31.555 64.997 1.00 20.55
ATOM 2475 CA ASN A 317 14.354 32.624 64.115 1.00 19.34
ATOM 2476 C ASN A 317 15.603 33.333 64.531 1.00 30.38
ATOM 2477 O ASN A 317 16.553 33.425 63.766 1.00 32.04
ATOM 2478 CB ASN A 317 13.273 33.682 63.838 1.00 14.82
ATOM 2479 CG ASN A 317 12.330 33.177 62.793 1.00 31.14
ATOM 2480 OD1 ASN A 317 12.151 31.966 62.657 1.00 38.42
ATOM 2481 ND2 ASN A 317 11.724 34.074 62.049 1.00 17.34
ATOM 2482 N GLU A 318 15.562 33.870 65.750 1.00 26.15
ATOM 2483 CA GLU A 318 16.624 34.648 66.358 1.00 20.23
ATOM 2484 C GLU A 318 17.860 33.884 66.816 1.00 23.53
ATOM 2485 O GLU A 318 19.006 34.273 66.554 1.00 26.34
ATOM 2486 CB GLU A 318 15.998 35.484 67.456 1.00 19.11
ATOM 2487 CG GLU A 318 14.999 36.480 66.800 1.00 24.06
ATOM 2488 CD GLU A 318 15.615 37.391 65.758 1.00 40.32
ATOM 2489 OE1 GLU A 318 16.833 37.559 65.612 1.00 21.24
ATOM 2490 OE2 GLU A 318 14.703 38.025 65.062 1.00 24.23
ATOM 2491 N GLY A 319 17.621 32.782 67.494 1.00 17.17
ATOM 2492 CA GLY A 319 18.681 31.955 68.016 1.00 15.31
ATOM 2493 C GLY A 319 19.673 31.601 66.953 1.00 24.07
ATOM 2494 O GLY A 319 20.860 31.897 67.080 1.00 28.47
ATOM 2495 N HIS A 320 19.165 30.956 65.907 1.00 20.24
ATOM 2496 CA HIS A 320 19.977 30.556 64.790 1.00 20.13
ATOM 2497 C HIS A 320 20.678 31.759 64.142 1.00 24.97
ATOM 2498 O HIS A 320 21.855 31.700 63.739 1.00 23.54
ATOM 2499 CB HIS A 320 19.143 29.737 63.791 1.00 20.57
ATOM 2500 CG HIS A 320 18.662 28.426 64.349 1.00 22.57
ATOM 2501 ND1 HIS A 320 17.471 28.332 65.058 1.00 22.98
ATOM 2502 CD2 HIS A 320 19.217 27.176 64.286 1.00 19.52
ATOM 2503 CE1 HIS A 320 17.336 27.046 65.385 1.00 19.18
ATOM 2504 NE2 HIS A 320 18.368 26.329 64.952 1.00 18.12
ATOM 2505 N THR A 321 19.958 32.875 64.053 1.00 21.61
ATOM 2506 CA THR A 321 20.543 34.056 63.478 1.00 22.16
ATOM 2507 C THR A 321 21.697 34.552 64.342 1.00 27.47
ATOM 2508 O THR A 321 22.789 34.825 63.836 1.00 26.64
ATOM 2509 CB THR A 321 19.470 35.097 63.113 1.00 27.88

ATOM	2510	OG1	THR	A	321	18.403	34.392	62.523	1.00	27.92
ATOM	2511	CG2	THR	A	321	19.999	36.088	62.087	1.00	18.05
ATOM	2512	N	VAL	A	322	21.496	34.634	65.659	1.00	21.90
ATOM	2513	CA	VAL	A	322	22.610	35.054	66.470	1.00	19.44
ATOM	2514	C	VAL	A	322	23.762	34.071	66.285	1.00	24.43
ATOM	2515	O	VAL	A	322	24.926	34.414	66.188	1.00	21.48
ATOM	2516	CB	VAL	A	322	22.218	35.185	67.928	1.00	20.92
ATOM	2517	CG1	VAL	A	322	23.406	35.644	68.772	1.00	18.37
ATOM	2518	CG2	VAL	A	322	21.093	36.200	68.048	1.00	20.01
ATOM	2519	N	TYR	A	323	23.427	32.811	66.197	1.00	27.08
ATOM	2520	CA	TYR	A	323	24.446	31.803	66.013	1.00	26.26
ATOM	2521	C	TYR	A	323	25.222	32.036	64.728	1.00	28.26
ATOM	2522	O	TYR	A	323	26.431	31.894	64.643	1.00	27.51
ATOM	2523	CB	TYR	A	323	23.804	30.407	66.020	1.00	25.74
ATOM	2524	CG	TYR	A	323	24.867	29.341	65.987	1.00	26.66
ATOM	2525	CD1	TYR	A	323	25.539	28.957	67.150	1.00	29.09
ATOM	2526	CD2	TYR	A	323	25.199	28.713	64.789	1.00	24.52
ATOM	2527	CE1	TYR	A	323	26.530	27.974	67.157	1.00	22.56
ATOM	2528	CE2	TYR	A	323	26.178	27.722	64.770	1.00	25.31
ATOM	2529	CZ	TYR	A	323	26.846	27.370	65.944	1.00	29.19
ATOM	2530	OH	TYR	A	323	27.823	26.434	65.895	1.00	27.51
ATOM	2531	N	LEU	A	324	24.497	32.408	63.702	1.00	24.82
ATOM	2532	CA	LEU	A	324	25.135	32.638	62.439	1.00	26.04
ATOM	2533	C	LEU	A	324	25.832	33.952	62.417	1.00	30.92
ATOM	2534	O	LEU	A	324	26.903	34.045	61.851	1.00	33.76
ATOM	2535	CB	LEU	A	324	24.176	32.537	61.235	1.00	26.21
ATOM	2536	CG	LEU	A	324	23.916	31.112	60.778	1.00	28.46
ATOM	2537	CD1	LEU	A	324	22.752	31.109	59.791	1.00	28.95
ATOM	2538	CD2	LEU	A	324	25.169	30.508	60.151	1.00	26.54
ATOM	2539	N	GLU	A	325	25.234	34.976	63.033	1.00	27.04
ATOM	2540	CA	GLU	A	325	25.870	36.303	63.064	1.00	22.88
ATOM	2541	C	GLU	A	325	27.282	36.210	63.624	1.00	28.76
ATOM	2542	O	GLU	A	325	28.250	36.722	63.026	1.00	26.24
ATOM	2543	CB	GLU	A	325	25.016	37.365	63.759	1.00	22.01
ATOM	2544	CG	GLU	A	325	25.827	38.411	64.524	1.00	41.55
ATOM	2545	CD	GLU	A	325	25.035	39.040	65.646	1.00	72.11
ATOM	2546	OE1	GLU	A	325	23.866	38.764	65.862	1.00	41.88
ATOM	2547	OE2	GLU	A	325	25.719	39.922	66.350	1.00	67.15
ATOM	2548	N	ARG	A	326	27.349	35.479	64.755	1.00	27.84
ATOM	2549	CA	ARG	A	326	28.551	35.213	65.511	1.00	28.10
ATOM	2550	C	ARG	A	326	29.604	34.457	64.771	1.00	30.90
ATOM	2551	O	ARG	A	326	30.763	34.747	64.976	1.00	33.93
ATOM	2552	CB	ARG	A	326	28.334	34.761	66.947	1.00	31.52
ATOM	2553	CG	ARG	A	326	27.645	35.864	67.726	1.00	22.20
ATOM	2554	CD	ARG	A	326	27.462	35.572	69.203	1.00	28.71
ATOM	2555	NE	ARG	A	326	26.727	36.673	69.830	1.00	23.82
ATOM	2556	CZ	ARG	A	326	25.805	36.556	70.780	1.00	26.09
ATOM	2557	NH1	ARG	A	326	25.443	35.388	71.305	1.00	23.16
ATOM	2558	NH2	ARG	A	326	25.220	37.655	71.222	1.00	24.77
ATOM	2559	N	HIS	A	327	29.221	33.511	63.918	1.00	29.85
ATOM	2560	CA	HIS	A	327	30.207	32.777	63.120	1.00	30.52
ATOM	2561	C	HIS	A	327	30.778	33.738	62.085	1.00	35.50
ATOM	2562	O	HIS	A	327	31.966	33.777	61.822	1.00	36.74
ATOM	2563	CB	HIS	A	327	29.591	31.555	62.407	1.00	31.59
ATOM	2564	CG	HIS	A	327	29.764	30.259	63.176	1.00	34.51
ATOM	2565	ND1	HIS	A	327	30.963	29.913	63.788	1.00	36.17
ATOM	2566	CD2	HIS	A	327	28.875	29.263	63.432	1.00	35.58
ATOM	2567	CE1	HIS	A	327	30.778	28.740	64.384	1.00	35.27
ATOM	2568	NE2	HIS	A	327	29.532	28.322	64.191	1.00	35.56
ATOM	2569	N	ILE	A	328	29.902	34.549	61.511	1.00	31.10
ATOM	2570	CA	ILE	A	328	30.328	35.517	60.528	1.00	31.66

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ATOM   2571  C   ILE A 328      31.416  36.407  61.086  1.00 40.12
ATOM   2572  O   ILE A 328      32.451  36.615  60.465  1.00 40.81
ATOM   2573  CB  ILE A 328      29.175  36.379  59.998  1.00 32.94
ATOM   2574  CG1 ILE A 328      28.220  35.570  59.114  1.00 29.53
ATOM   2575  CG2 ILE A 328      29.694  37.591  59.201  1.00 30.91
ATOM   2576  CD1 ILE A 328      27.119  36.463  58.535  1.00 32.98
ATOM   2577  N   CYS A 329      31.179  36.948  62.266  1.00 37.88
ATOM   2578  CA  CYS A 329      32.170  37.810  62.851  1.00 39.54
ATOM   2579  C   CYS A 329      33.475  37.092  63.157  1.00 40.19
ATOM   2580  O   CYS A 329      34.567  37.642  62.971  1.00 38.44
ATOM   2581  CB  CYS A 329      31.607  38.509  64.083  1.00 42.61
ATOM   2582  SG  CYS A 329      30.241  39.595  63.619  1.00 48.14
ATOM   2583  N   GLY A 330      33.332  35.852  63.632  1.00 34.74
ATOM   2584  CA  GLY A 330      34.471  35.030  63.980  1.00 35.20
ATOM   2585  C   GLY A 330      35.359  34.854  62.778  1.00 43.66
ATOM   2586  O   GLY A 330      36.581  34.857  62.891  1.00 46.79
ATOM   2587  N   ARG A 331      34.709  34.725  61.622  1.00 34.99
ATOM   2588  CA  ARG A 331      35.416  34.562  60.392  1.00 33.19
ATOM   2589  C   ARG A 331      36.086  35.863  60.017  1.00 40.63
ATOM   2590  O   ARG A 331      37.238  35.914  59.586  1.00 44.40
ATOM   2591  CB  ARG A 331      34.494  34.101  59.269  1.00 31.29
ATOM   2592  CG  ARG A 331      33.987  32.685  59.450  1.00 47.66
ATOM   2593  CD  ARG A 331      34.812  31.722  58.622  1.00 70.36
ATOM   2594  NE  ARG A 331      34.461  31.851  57.221  1.00 80.25
ATOM   2595  CZ  ARG A 331      33.615  31.023  56.628  1.00100.00
ATOM   2596  NH1 ARG A 331      33.055  29.999  57.279  1.00 79.12
ATOM   2597  NH2 ARG A 331      33.334  31.216  55.341  1.00 89.33
ATOM   2598  N   LEU A 332      35.342  36.926  60.172  1.00 32.14
ATOM   2599  CA  LEU A 332      35.885  38.198  59.820  1.00 30.02
ATOM   2600  C   LEU A 332      37.013  38.612  60.761  1.00 40.33
ATOM   2601  O   LEU A 332      38.084  38.972  60.286  1.00 40.10
ATOM   2602  CB  LEU A 332      34.772  39.262  59.822  1.00 28.20
ATOM   2603  CG  LEU A 332      34.451  39.896  58.469  1.00 28.82
ATOM   2604  CD1 LEU A 332      35.007  39.063  57.341  1.00 23.73
ATOM   2605  CD2 LEU A 332      32.947  40.114  58.306  1.00 29.76
ATOM   2606  N   PHE A 333      36.744  38.557  62.091  1.00 37.69
ATOM   2607  CA  PHE A 333      37.657  38.997  63.143  1.00 34.12
ATOM   2608  C   PHE A 333      38.251  37.956  64.035  1.00 37.99
ATOM   2609  O   PHE A 333      39.015  38.293  64.925  1.00 41.67
ATOM   2610  CB  PHE A 333      36.970  40.058  64.024  1.00 35.62
ATOM   2611  CG  PHE A 333      36.209  41.003  63.138  1.00 39.09
ATOM   2612  CD1 PHE A 333      36.887  41.923  62.332  1.00 43.22
ATOM   2613  CD2 PHE A 333      34.818  40.941  63.045  1.00 42.78
ATOM   2614  CE1 PHE A 333      36.205  42.781  61.464  1.00 44.14
ATOM   2615  CE2 PHE A 333      34.123  41.806  62.194  1.00 46.56
ATOM   2616  CZ  PHE A 333      34.814  42.716  61.389  1.00 43.20
ATOM   2617  N   GLY A 334      37.908  36.706  63.865  1.00 34.36
ATOM   2618  CA  GLY A 334      38.507  35.705  64.763  1.00 32.89
ATOM   2619  C   GLY A 334      37.582  34.985  65.767  1.00 32.67
ATOM   2620  O   GLY A 334      36.641  35.540  66.340  1.00 33.48
ATOM   2621  N   GLU A 335      37.908  33.726  66.003  1.00 23.52
ATOM   2622  CA  GLU A 335      37.196  32.875  66.931  1.00 18.13
ATOM   2623  C   GLU A 335      37.278  33.384  68.346  1.00 29.15
ATOM   2624  O   GLU A 335      36.357  33.124  69.112  1.00 34.14
ATOM   2625  CB  GLU A 335      37.782  31.488  66.929  1.00 17.35
ATOM   2626  CG  GLU A 335      37.041  30.591  67.929  1.00 32.97
ATOM   2627  CD  GLU A 335      35.642  30.305  67.473  1.00 46.14
ATOM   2628  OE1 GLU A 335      35.093  30.944  66.588  1.00 39.31
ATOM   2629  OE2 GLU A 335      35.080  29.317  68.132  1.00 32.80
ATOM   2630  N   LYS A 336      38.370  34.077  68.706  1.00 24.53
ATOM   2631  CA  LYS A 336      38.468  34.609  70.061  1.00 25.38
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ATOM 2632 C LYS A 336 37.445 35.726 70.169 1.00 35.32
ATOM 2633 O LYS A 336 36.908 36.004 71.233 1.00 38.14
ATOM 2634 CB LYS A 336 39.820 35.199 70.421 1.00 25.45
ATOM 2635 CG LYS A 336 40.871 34.188 70.825 1.00 25.43
ATOM 2636 CD LYS A 336 42.207 34.846 71.189 1.00 47.10
ATOM 2637 CE LYS A 336 43.325 34.600 70.172 1.00 68.74
ATOM 2638 NZ LYS A 336 44.566 34.072 70.767 1.00 77.62
ATOM 2639 N PHE A 337 37.174 36.364 69.029 1.00 31.52
ATOM 2640 CA PHE A 337 36.186 37.442 68.967 1.00 29.34
ATOM 2641 C PHE A 337 34.783 36.869 69.083 1.00 31.73
ATOM 2642 O PHE A 337 33.908 37.424 69.742 1.00 35.53
ATOM 2643 CB PHE A 337 36.304 38.336 67.709 1.00 30.04
ATOM 2644 CG PHE A 337 35.435 39.589 67.747 1.00 35.16
ATOM 2645 CD1 PHE A 337 35.468 40.459 68.843 1.00 43.88
ATOM 2646 CD2 PHE A 337 34.550 39.893 66.709 1.00 40.16
ATOM 2647 CE1 PHE A 337 34.688 41.617 68.913 1.00 46.53
ATOM 2648 CE2 PHE A 337 33.753 41.040 66.760 1.00 45.62
ATOM 2649 CZ PHE A 337 33.830 41.908 67.852 1.00 45.57
ATOM 2650 N ARG A 338 34.566 35.733 68.452 1.00 25.52
ATOM 2651 CA ARG A 338 33.266 35.119 68.508 1.00 25.23
ATOM 2652 C ARG A 338 32.944 34.759 69.922 1.00 29.77
ATOM 2653 O ARG A 338 31.854 35.025 70.415 1.00 31.81
ATOM 2654 CB ARG A 338 33.186 33.920 67.606 1.00 24.04
ATOM 2655 CG ARG A 338 31.839 33.228 67.623 1.00 21.31
ATOM 2656 CD ARG A 338 31.807 32.086 66.599 1.00 30.62
ATOM 2657 NE ARG A 338 32.518 30.892 67.040 1.00 29.87
ATOM 2658 CZ ARG A 338 31.919 29.781 67.466 1.00 26.37
ATOM 2659 NH1 ARG A 338 30.616 29.687 67.518 1.00 20.26
ATOM 2660 NH2 ARG A 338 32.632 28.737 67.864 1.00 18.57
ATOM 2661 N HIS A 339 33.934 34.190 70.577 1.00 25.88
ATOM 2662 CA HIS A 339 33.813 33.797 71.982 1.00 25.59
ATOM 2663 C HIS A 339 33.455 34.972 72.892 1.00 27.61
ATOM 2664 O HIS A 339 32.615 34.912 73.793 1.00 25.27
ATOM 2665 CB HIS A 339 35.065 33.045 72.462 1.00 25.06
ATOM 2666 CG HIS A 339 34.923 31.587 72.155 1.00 28.13
ATOM 2667 ND1 HIS A 339 35.049 30.612 73.127 1.00 30.52
ATOM 2668 CD2 HIS A 339 34.586 30.970 70.981 1.00 30.89
ATOM 2669 CE1 HIS A 339 34.843 29.442 72.535 1.00 30.89
ATOM 2670 NE2 HIS A 339 34.546 29.616 71.245 1.00 31.36
ATOM 2671 N PHE A 340 34.103 36.065 72.608 1.00 24.54
ATOM 2672 CA PHE A 340 33.892 37.278 73.334 1.00 25.36
ATOM 2673 C PHE A 340 32.452 37.762 73.216 1.00 32.47
ATOM 2674 O PHE A 340 31.822 38.222 74.190 1.00 32.78
ATOM 2675 CB PHE A 340 34.876 38.309 72.801 1.00 26.03
ATOM 2676 CG PHE A 340 34.654 39.671 73.346 1.00 26.47
ATOM 2677 CD1 PHE A 340 35.238 40.047 74.559 1.00 24.59
ATOM 2678 CD2 PHE A 340 33.902 40.592 72.616 1.00 28.22
ATOM 2679 CE1 PHE A 340 35.063 41.330 75.072 1.00 21.58
ATOM 2680 CE2 PHE A 340 33.715 41.879 73.115 1.00 29.13
ATOM 2681 CZ PHE A 340 34.280 42.225 74.345 1.00 25.28
ATOM 2682 N ASN A 341 31.944 37.663 72.004 1.00 28.41
ATOM 2683 CA ASN A 341 30.600 38.084 71.728 1.00 29.60
ATOM 2684 C ASN A 341 29.665 37.110 72.379 1.00 38.52
ATOM 2685 O ASN A 341 28.699 37.511 73.029 1.00 42.88
ATOM 2686 CB ASN A 341 30.322 38.274 70.224 1.00 30.01
ATOM 2687 CG ASN A 341 31.159 39.374 69.587 1.00 52.80
ATOM 2688 OD1 ASN A 341 31.528 39.284 68.404 1.00 60.88
ATOM 2689 ND2 ASN A 341 31.442 40.427 70.359 1.00 41.02
ATOM 2690 N ALA A 342 29.994 35.826 72.239 1.00 28.24
ATOM 2691 CA ALA A 342 29.195 34.800 72.877 1.00 26.95
ATOM 2692 C ALA A 342 29.013 35.134 74.393 1.00 35.98

ATOM 2693 O ALA A 342 27.877 35.261 74.897 1.00 35.09
ATOM 2694 CB ALA A 342 29.837 33.422 72.671 1.00 25.45
ATOM 2695 N LEU A 343 30.153 35.304 75.122 1.00 29.16
ATOM 2696 CA LEU A 343 30.162 35.633 76.560 1.00 22.58
ATOM 2697 C LEU A 343 29.310 36.854 76.831 1.00 27.48
ATOM 2698 O LEU A 343 28.452 36.821 77.696 1.00 32.73
ATOM 2699 CB LEU A 343 31.583 35.786 77.147 1.00 18.70
ATOM 2700 CG LEU A 343 31.647 35.693 78.671 1.00 20.08
ATOM 2701 CD1 LEU A 343 30.842 34.510 79.204 1.00 17.76
ATOM 2702 CD2 LEU A 343 33.091 35.522 79.111 1.00 21.94
ATOM 2703 N GLY A 344 29.512 37.936 76.080 1.00 22.60
ATOM 2704 CA GLY A 344 28.670 39.146 76.278 1.00 24.15
ATOM 2705 C GLY A 344 27.157 38.824 76.136 1.00 31.38
ATOM 2706 O GLY A 344 26.339 39.260 76.943 1.00 32.44
ATOM 2707 N GLY A 345 26.806 38.017 75.094 1.00 22.79
ATOM 2708 CA GLY A 345 25.451 37.587 74.801 1.00 19.88
ATOM 2709 C GLY A 345 24.787 36.994 76.034 1.00 28.37
ATOM 2710 O GLY A 345 23.632 37.294 76.325 1.00 27.56
ATOM 2711 N TRP A 346 25.547 36.153 76.765 1.00 25.41
ATOM 2712 CA TRP A 346 25.082 35.520 77.994 1.00 23.90
ATOM 2713 C TRP A 346 24.825 36.541 79.071 1.00 31.54
ATOM 2714 O TRP A 346 23.957 36.379 79.924 1.00 29.57
ATOM 2715 CB TRP A 346 26.122 34.556 78.562 1.00 21.53
ATOM 2716 CG TRP A 346 25.680 33.880 79.837 1.00 21.92
ATOM 2717 CD1 TRP A 346 25.933 34.335 81.079 1.00 24.36
ATOM 2718 CD2 TRP A 346 25.004 32.597 80.010 1.00 20.97
ATOM 2719 NE1 TRP A 346 25.450 33.453 82.008 1.00 23.95
ATOM 2720 CE2 TRP A 346 24.859 32.388 81.391 1.00 24.13
ATOM 2721 CE3 TRP A 346 24.488 31.611 79.144 1.00 21.46
ATOM 2722 CZ2 TRP A 346 24.225 31.244 81.921 1.00 22.89
ATOM 2723 CZ3 TRP A 346 23.872 30.477 79.662 1.00 22.03
ATOM 2724 CH2 TRP A 346 23.747 30.286 81.046 1.00 21.87
ATOM 2725 N GLY A 347 25.627 37.593 79.039 1.00 29.66
ATOM 2726 CA GLY A 347 25.465 38.625 80.042 1.00 29.03
ATOM 2727 C GLY A 347 24.156 39.333 79.844 1.00 33.01
ATOM 2728 O GLY A 347 23.491 39.647 80.799 1.00 34.17
ATOM 2729 N GLU A 348 23.797 39.574 78.581 1.00 30.57
ATOM 2730 CA GLU A 348 22.535 40.220 78.250 1.00 29.17
ATOM 2731 C GLU A 348 21.423 39.282 78.664 1.00 31.25
ATOM 2732 O GLU A 348 20.373 39.663 79.142 1.00 33.71
ATOM 2733 CB GLU A 348 22.432 40.606 76.757 1.00 30.33
ATOM 2734 CG GLU A 348 23.432 41.715 76.336 1.00 49.41
ATOM 2735 CD GLU A 348 23.209 43.088 76.964 1.00 73.39
ATOM 2736 OE1 GLU A 348 22.295 43.846 76.656 1.00 71.22
ATOM 2737 OE2 GLU A 348 24.119 43.395 77.857 1.00 44.23
ATOM 2738 N LEU A 349 21.682 38.011 78.541 1.00 27.36
ATOM 2739 CA LEU A 349 20.677 37.081 78.976 1.00 26.89
ATOM 2740 C LEU A 349 20.429 37.250 80.485 1.00 24.87
ATOM 2741 O LEU A 349 19.299 37.403 80.914 1.00 28.31
ATOM 2742 CB LEU A 349 20.984 35.630 78.529 1.00 27.18
ATOM 2743 CG LEU A 349 19.943 34.565 78.942 1.00 32.45
ATOM 2744 CD1 LEU A 349 18.611 34.704 78.154 1.00 30.09
ATOM 2745 CD2 LEU A 349 20.541 33.169 78.749 1.00 27.10
ATOM 2746 N GLN A 350 21.460 37.255 81.315 1.00 14.78
ATOM 2747 CA GLN A 350 21.188 37.428 82.727 1.00 18.51
ATOM 2748 C GLN A 350 20.442 38.722 82.953 1.00 25.53
ATOM 2749 O GLN A 350 19.495 38.833 83.737 1.00 28.35
ATOM 2750 CB GLN A 350 22.469 37.369 83.536 1.00 22.22
ATOM 2751 CG GLN A 350 23.512 36.426 82.919 1.00 22.37
ATOM 2752 CD GLN A 350 24.871 36.673 83.547 1.00 34.49
ATOM 2753 OE1 GLN A 350 25.261 35.932 84.417 1.00 24.01

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ATOM   2754  NE2 GLN A 350      25.588  37.727  83.127  1.00 36.58
ATOM   2755  N   ASN A 351      20.838  39.696  82.201  1.00 22.64
ATOM   2756  CA  ASN A 351      20.163  40.960  82.273  1.00 26.10
ATOM   2757  C   ASN A 351      18.661  40.780  82.083  1.00 37.49
ATOM   2758  O   ASN A 351      17.890  41.098  82.977  1.00 41.41
ATOM   2759  CB  ASN A 351      20.769  42.021  81.341  1.00 20.74
ATOM   2760  CG  ASN A 351      22.118  42.477  81.847  1.00 23.25
ATOM   2761  OD1 ASN A 351      22.692  41.875  82.771  1.00 26.88
ATOM   2762  ND2 ASN A 351      22.644  43.530  81.247  1.00 32.93
ATOM   2763  N   SER A 352      18.228  40.252  80.938  1.00 32.84
ATOM   2764  CA  SER A 352      16.784  40.041  80.715  1.00 34.27
ATOM   2765  C   SER A 352      16.107  39.135  81.784  1.00 31.72
ATOM   2766  O   SER A 352      14.927  39.266  82.189  1.00 28.64
ATOM   2767  CB  SER A 352      16.503  39.531  79.301  1.00 42.57
ATOM   2768  OG  SER A 352      17.506  39.979  78.407  1.00 49.17
ATOM   2769  N   VAL A 353      16.874  38.188  82.247  1.00 21.90
ATOM   2770  CA  VAL A 353      16.322  37.351  83.234  1.00 22.13
ATOM   2771  C   VAL A 353      16.068  38.122  84.516  1.00 36.22
ATOM   2772  O   VAL A 353      14.958  38.076  85.052  1.00 37.69
ATOM   2773  CB  VAL A 353      17.137  36.070  83.419  1.00 20.84
ATOM   2774  CG1 VAL A 353      16.632  35.256  84.634  1.00 15.06
ATOM   2775  CG2 VAL A 353      16.968  35.284  82.105  1.00 20.93
ATOM   2776  N   LYS A 354      17.086  38.847  85.002  1.00 30.67
ATOM   2777  CA  LYS A 354      16.880  39.587  86.221  1.00 31.71
ATOM   2778  C   LYS A 354      15.660  40.474  86.098  1.00 36.17
ATOM   2779  O   LYS A 354      14.808  40.582  86.980  1.00 35.80
ATOM   2780  CB  LYS A 354      18.099  40.396  86.624  1.00 35.28
ATOM   2781  CG  LYS A 354      17.841  41.303  87.818  1.00 51.51
ATOM   2782  CD  LYS A 354      19.038  41.405  88.749  1.00 60.46
ATOM   2783  CE  LYS A 354      19.198  42.780  89.383  1.00 50.09
ATOM   2784  NZ  LYS A 354      20.596  43.133  89.657  1.00 63.77
ATOM   2785  N   THR A 355      15.608  41.108  84.962  1.00 32.63
ATOM   2786  CA  THR A 355      14.562  42.025  84.610  1.00 34.03
ATOM   2787  C   THR A 355      13.129  41.422  84.578  1.00 42.11
ATOM   2788  O   THR A 355      12.216  42.006  85.154  1.00 40.96
ATOM   2789  CB  THR A 355      14.974  42.736  83.308  1.00 41.11
ATOM   2790  OG1 THR A 355      16.071  43.615  83.542  1.00 29.85
ATOM   2791  CG2 THR A 355      13.798  43.438  82.656  1.00 45.50
ATOM   2792  N   PHE A 356      12.895  40.273  83.908  1.00 33.89
ATOM   2793  CA  PHE A 356      11.556  39.729  83.860  1.00 29.29
ATOM   2794  C   PHE A 356      11.209  39.070  85.147  1.00 31.93
ATOM   2795  O   PHE A 356      10.089  39.152  85.642  1.00 33.85
ATOM   2796  CB  PHE A 356      11.460  38.645  82.785  1.00 33.30
ATOM   2797  CG  PHE A 356      11.187  39.196  81.416  1.00 36.54
ATOM   2798  CD1 PHE A 356      10.106  40.054  81.224  1.00 42.38
ATOM   2799  CD2 PHE A 356      11.985  38.858  80.320  1.00 38.62
ATOM   2800  CE1 PHE A 356       9.831  40.596  79.968  1.00 44.75
ATOM   2801  CE2 PHE A 356      11.723  39.384  79.055  1.00 43.46
ATOM   2802  CZ  PHE A 356      10.649  40.261  78.890  1.00 43.86
ATOM   2803  N   GLY A 357      12.212  38.386  85.661  1.00 30.41
ATOM   2804  CA  GLY A 357      12.152  37.564  86.864  1.00 29.17
ATOM   2805  C   GLY A 357      12.446  36.100  86.438  1.00 28.92
ATOM   2806  O   GLY A 357      12.008  35.642  85.372  1.00 27.33
ATOM   2807  N   GLU A 358      13.211  35.382  87.243  1.00 21.27
ATOM   2808  CA  GLU A 358      13.590  34.040  86.898  1.00 23.10
ATOM   2809  C   GLU A 358      12.424  33.104  86.747  1.00 31.53
ATOM   2810  O   GLU A 358      12.581  31.972  86.294  1.00 30.92
ATOM   2811  CB  GLU A 358      14.596  33.473  87.880  1.00 25.36
ATOM   2812  CG  GLU A 358      14.011  33.436  89.301  1.00 38.73
ATOM   2813  CD  GLU A 358      15.011  33.037  90.345  1.00 56.34
ATOM   2814  OE1 GLU A 358      16.026  32.446  90.071  1.00 50.55
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ATOM   2815  OE2 GLU A 358      14.678  33.403  91.564  1.00 75.65
ATOM   2816  N   THR A 359      11.246  33.542  87.139  1.00 27.87
ATOM   2817  CA  THR A 359      10.154  32.625  86.970  1.00 25.66
ATOM   2818  C   THR A 359       9.236  33.152  85.906  1.00 25.96
ATOM   2819  O   THR A 359       8.247  32.528  85.533  1.00 25.58
ATOM   2820  CB  THR A 359       9.423  32.341  88.253  1.00 25.00
ATOM   2821  OG1 THR A 359       8.908  33.565  88.692  1.00 33.10
ATOM   2822  CG2 THR A 359      10.406  31.785  89.273  1.00 14.43
ATOM   2823  N   HIS A 360       9.602  34.310  85.407  1.00 20.75
ATOM   2824  CA  HIS A 360       8.837  34.902  84.363  1.00 22.77
ATOM   2825  C   HIS A 360       8.823  34.034  83.130  1.00 35.30
ATOM   2826  O   HIS A 360       9.858  33.611  82.620  1.00 37.42
ATOM   2827  CB  HIS A 360       9.294  36.291  83.982  1.00 23.18
ATOM   2828  CG  HIS A 360       8.207  36.908  83.219  1.00 27.05
ATOM   2829  ND1 HIS A 360       7.532  38.009  83.691  1.00 29.34
ATOM   2830  CD2 HIS A 360       7.651  36.545  82.059  1.00 29.91
ATOM   2831  CE1 HIS A 360       6.596  38.315  82.806  1.00 27.94
ATOM   2832  NE2 HIS A 360       6.651  37.440  81.812  1.00 29.60
ATOM   2833  N   PRO A 361       7.606  33.817  82.666  1.00 32.40
ATOM   2834  CA  PRO A 361       7.301  32.999  81.519  1.00 29.46
ATOM   2835  C   PRO A 361       7.862  33.478  80.224  1.00 30.59
ATOM   2836  O   PRO A 361       7.907  32.737  79.248  1.00 33.00
ATOM   2837  CB  PRO A 361       5.770  32.963  81.478  1.00 30.74
ATOM   2838  CG  PRO A 361       5.311  33.172  82.927  1.00 34.96
ATOM   2839  CD  PRO A 361       6.463  33.869  83.627  1.00 31.82
ATOM   2840  N   PHE A 362       8.289  34.712  80.179  1.00 26.32
ATOM   2841  CA  PHE A 362       8.823  35.173  78.933  1.00 25.68
ATOM   2842  C   PHE A 362      10.261  34.781  78.829  1.00 29.73
ATOM   2843  O   PHE A 362      10.906  35.131  77.870  1.00 32.02
ATOM   2844  CB  PHE A 362       8.643  36.677  78.723  1.00 28.12
ATOM   2845  CG  PHE A 362       7.194  37.105  78.629  1.00 30.03
ATOM   2846  CD1 PHE A 362       6.204  36.276  78.098  1.00 30.92
ATOM   2847  CD2 PHE A 362       6.804  38.372  79.051  1.00 32.04
ATOM   2848  CE1 PHE A 362       4.864  36.655  77.998  1.00 26.59
ATOM   2849  CE2 PHE A 362       5.470  38.773  78.952  1.00 32.40
ATOM   2850  CZ  PHE A 362       4.495  37.920  78.435  1.00 26.37
ATOM   2851  N   THR A 363      10.730  34.049  79.843  1.00 27.22
ATOM   2852  CA  THR A 363      12.102  33.575  79.943  1.00 27.52
ATOM   2853  C   THR A 363      12.251  32.132  79.504  1.00 29.28
ATOM   2854  O   THR A 363      13.331  31.560  79.524  1.00 29.42
ATOM   2855  CB  THR A 363      12.697  33.777  81.360  1.00 31.67
ATOM   2856  OG1 THR A 363      12.279  32.745  82.218  1.00 26.17
ATOM   2857  CG2 THR A 363      12.278  35.118  81.930  1.00 31.62
ATOM   2858  N   LYS A 364      11.148  31.530  79.113  1.00 23.08
ATOM   2859  CA  LYS A 364      11.174  30.160  78.664  1.00 20.50
ATOM   2860  C   LYS A 364      11.556  30.270  77.217  1.00 28.83
ATOM   2861  O   LYS A 364      11.139  31.239  76.570  1.00 29.80
ATOM   2862  CB  LYS A 364       9.766  29.584  78.667  1.00 23.55
ATOM   2863  CG  LYS A 364       9.252  29.134  80.022  1.00 40.85
ATOM   2864  CD  LYS A 364       7.761  29.369  80.162  1.00 44.83
ATOM   2865  CE  LYS A 364       7.131  28.492  81.224  1.00 66.38
ATOM   2866  NZ  LYS A 364       6.063  27.638  80.691  1.00 91.70
ATOM   2867  N   LEU A 365      12.332  29.328  76.698  1.00 23.57
ATOM   2868  CA  LEU A 365      12.699  29.420  75.312  1.00 23.95
ATOM   2869  C   LEU A 365      11.414  29.419  74.445  1.00 35.57
ATOM   2870  O   LEU A 365      11.166  30.369  73.708  1.00 34.58
ATOM   2871  CB  LEU A 365      13.702  28.303  75.021  1.00 25.08
ATOM   2872  CG  LEU A 365      14.456  28.372  73.702  1.00 31.15
ATOM   2873  CD1 LEU A 365      14.987  29.778  73.466  1.00 33.16
ATOM   2874  CD2 LEU A 365      15.609  27.353  73.781  1.00 30.62
ATOM   2875  N   VAL A 366      10.572  28.360  74.564  1.00 35.62
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ATOM 2876 CA VAL A 366 9.294 28.232 73.840 1.00 32.10
ATOM 2877 C VAL A 366 8.211 28.911 74.694 1.00 33.14
ATOM 2878 O VAL A 366 7.982 28.470 75.808 1.00 34.20
ATOM 2879 CB VAL A 366 8.936 26.739 73.568 1.00 34.73
ATOM 2880 CG1 VAL A 366 7.558 26.605 72.933 1.00 34.88
ATOM 2881 CG2 VAL A 366 9.922 26.012 72.649 1.00 32.65
ATOM 2882 N VAL A 367 7.562 29.990 74.211 1.00 28.76
ATOM 2883 CA VAL A 367 6.532 30.700 74.987 1.00 28.27
ATOM 2884 C VAL A 367 5.161 30.613 74.420 1.00 30.62
ATOM 2885 O VAL A 367 4.994 30.509 73.235 1.00 34.30
ATOM 2886 CB VAL A 367 6.773 32.185 75.061 1.00 33.45
ATOM 2887 CG1 VAL A 367 8.178 32.478 75.565 1.00 33.03
ATOM 2888 CG2 VAL A 367 6.498 32.804 73.693 1.00 33.18
ATOM 2889 N ASP A 368 4.168 30.722 75.290 1.00 29.27
ATOM 2890 CA ASP A 368 2.764 30.771 74.984 1.00 27.67
ATOM 2891 C ASP A 368 2.315 32.207 74.862 1.00 26.94
ATOM 2892 O ASP A 368 2.283 32.975 75.830 1.00 23.11
ATOM 2893 CB ASP A 368 1.990 30.073 76.100 1.00 26.80
ATOM 2894 CG ASP A 368 0.572 29.781 75.613 1.00 37.90
ATOM 2895 OD1 ASP A 368 0.276 30.123 74.481 1.00 38.93
ATOM 2896 OD2 ASP A 368 -0.215 29.217 76.380 1.00 38.59
ATOM 2897 N LEU A 369 2.027 32.588 73.622 1.00 26.55
ATOM 2898 CA LEU A 369 1.643 33.953 73.373 1.00 27.39
ATOM 2899 C LEU A 369 0.138 34.105 73.301 1.00 30.74
ATOM 2900 O LEU A 369 -0.372 34.979 72.648 1.00 30.68
ATOM 2901 CB LEU A 369 2.281 34.395 72.064 1.00 26.06
ATOM 2902 CG LEU A 369 3.759 34.760 72.229 1.00 26.80
ATOM 2903 CD1 LEU A 369 4.343 35.415 70.994 1.00 24.30
ATOM 2904 CD2 LEU A 369 4.014 35.728 73.384 1.00 21.81
ATOM 2905 N THR A 370 -0.577 33.154 73.953 1.00 30.26
ATOM 2906 CA THR A 370 -2.022 33.306 74.093 1.00 31.38
ATOM 2907 C THR A 370 -2.355 34.519 74.941 1.00 38.62
ATOM 2908 O THR A 370 -1.821 34.714 76.027 1.00 38.84
ATOM 2909 CB THR A 370 -2.601 32.056 74.750 1.00 34.04
ATOM 2910 OG1 THR A 370 -2.472 30.949 73.873 1.00 29.99
ATOM 2911 CG2 THR A 370 -4.091 32.266 75.052 1.00 26.40
ATOM 2912 N ASP A 371 -3.173 35.387 74.363 1.00 37.89
ATOM 2913 CA ASP A 371 -3.641 36.612 75.012 1.00 37.85
ATOM 2914 C ASP A 371 -2.557 37.636 75.255 1.00 40.92
ATOM 2915 O ASP A 371 -2.784 38.625 75.933 1.00 41.63
ATOM 2916 CB ASP A 371 -4.519 36.375 76.245 1.00 39.88
ATOM 2917 CG ASP A 371 -5.805 35.733 75.798 1.00 51.30
ATOM 2918 OD1 ASP A 371 -6.373 36.072 74.761 1.00 50.39
ATOM 2919 OD2 ASP A 371 -6.206 34.754 76.583 1.00 48.61
ATOM 2920 N ILE A 372 -1.387 37.398 74.664 1.00 36.37
ATOM 2921 CA ILE A 372 -0.259 38.283 74.817 1.00 34.61
ATOM 2922 C ILE A 372 0.203 39.018 73.555 1.00 35.46
ATOM 2923 O ILE A 372 0.545 38.400 72.548 1.00 36.69
ATOM 2924 CB ILE A 372 0.920 37.511 75.381 1.00 36.51
ATOM 2925 CG1 ILE A 372 0.658 37.195 76.842 1.00 37.01
ATOM 2926 CG2 ILE A 372 2.121 38.441 75.281 1.00 35.52
ATOM 2927 CD1 ILE A 372 1.268 38.261 77.747 1.00 54.33
ATOM 2928 N ASP A 373 0.254 40.345 73.601 1.00 25.92
ATOM 2929 CA ASP A 373 0.747 41.053 72.450 1.00 23.77
ATOM 2930 C ASP A 373 2.263 40.781 72.360 1.00 31.40
ATOM 2931 O ASP A 373 3.040 41.002 73.305 1.00 32.80
ATOM 2932 CB ASP A 373 0.408 42.543 72.519 1.00 25.08
ATOM 2933 CG ASP A 373 1.064 43.356 71.418 1.00 43.24
ATOM 2934 OD1 ASP A 373 1.861 42.894 70.616 1.00 45.30
ATOM 2935 OD2 ASP A 373 0.668 44.610 71.395 1.00 38.59
ATOM 2936 N PRO A 374 2.709 40.267 71.225 1.00 29.51

ATOM 2937 CA PRO A 374 4.123 39.943 71.132 1.00 28.52
ATOM 2938 C PRO A 374 5.029 41.090 71.506 1.00 32.54
ATOM 2939 O PRO A 374 6.019 40.905 72.217 1.00 29.62
ATOM 2940 CB PRO A 374 4.390 39.421 69.714 1.00 28.88
ATOM 2941 CG PRO A 374 3.028 39.278 69.032 1.00 32.27
ATOM 2942 CD PRO A 374 1.966 39.786 70.008 1.00 28.84
ATOM 2943 N ASP A 375 4.660 42.257 70.981 1.00 26.85
ATOM 2944 CA ASP A 375 5.357 43.511 71.154 1.00 24.25
ATOM 2945 C ASP A 375 5.695 43.783 72.628 1.00 33.10
ATOM 2946 O ASP A 375 6.648 44.494 72.988 1.00 30.67
ATOM 2947 CB ASP A 375 4.507 44.617 70.509 1.00 24.46
ATOM 2948 CG ASP A 375 4.753 44.836 69.033 1.00 30.08
ATOM 2949 OD1 ASP A 375 5.703 44.393 68.411 1.00 33.47
ATOM 2950 OD2 ASP A 375 3.852 45.609 68.491 1.00 38.41
ATOM 2951 N VAL A 376 4.885 43.161 73.477 1.00 30.21
ATOM 2952 CA VAL A 376 5.001 43.232 74.904 1.00 25.40
ATOM 2953 C VAL A 376 5.879 42.106 75.431 1.00 37.27
ATOM 2954 O VAL A 376 6.599 42.299 76.394 1.00 42.46
ATOM 2955 CB VAL A 376 3.638 43.099 75.550 1.00 22.48
ATOM 2956 CG1 VAL A 376 3.799 42.533 76.975 1.00 21.25
ATOM 2957 CG2 VAL A 376 2.926 44.440 75.547 1.00 18.29
ATOM 2958 N ALA A 377 5.811 40.905 74.831 1.00 30.48
ATOM 2959 CA ALA A 377 6.671 39.793 75.288 1.00 27.04
ATOM 2960 C ALA A 377 8.149 39.911 74.797 1.00 28.15
ATOM 2961 O ALA A 377 9.077 39.325 75.312 1.00 27.36
ATOM 2962 CB ALA A 377 6.091 38.433 74.891 1.00 26.74
ATOM 2963 N TYR A 378 8.376 40.692 73.768 1.00 25.81
ATOM 2964 CA TYR A 378 9.683 40.876 73.161 1.00 25.43
ATOM 2965 C TYR A 378 10.862 41.194 74.057 1.00 30.49
ATOM 2966 O TYR A 378 10.873 42.204 74.747 1.00 32.35
ATOM 2967 CB TYR A 378 9.549 41.924 72.068 1.00 26.20
ATOM 2968 CG TYR A 378 10.804 42.168 71.327 1.00 19.90
ATOM 2969 CD1 TYR A 378 11.256 41.231 70.406 1.00 18.53
ATOM 2970 CD2 TYR A 378 11.536 43.331 71.543 1.00 18.47
ATOM 2971 CE1 TYR A 378 12.444 41.436 69.716 1.00 15.98
ATOM 2972 CE2 TYR A 378 12.719 43.555 70.840 1.00 18.77
ATOM 2973 CZ TYR A 378 13.161 42.609 69.920 1.00 16.37
ATOM 2974 OH TYR A 378 14.309 42.811 69.212 1.00 32.30
ATOM 2975 N SER A 379 11.879 40.317 73.977 1.00 23.03
ATOM 2976 CA SER A 379 13.115 40.430 74.725 1.00 18.13
ATOM 2977 C SER A 379 14.267 39.777 73.970 1.00 20.60
ATOM 2978 O SER A 379 14.100 39.334 72.843 1.00 18.46
ATOM 2979 CB SER A 379 12.976 39.740 76.067 1.00 23.56
ATOM 2980 OG SER A 379 12.805 38.329 75.883 1.00 37.26
ATOM 2981 N SER A 380 15.424 39.697 74.651 1.00 23.65
ATOM 2982 CA SER A 380 16.701 39.084 74.222 1.00 26.09
ATOM 2983 C SER A 380 16.669 37.571 74.457 1.00 28.37
ATOM 2984 O SER A 380 17.480 36.785 73.975 1.00 30.81
ATOM 2985 CB SER A 380 17.889 39.588 75.062 1.00 31.60
ATOM 2986 OG SER A 380 18.036 41.000 75.033 1.00 42.48
ATOM 2987 N VAL A 381 15.718 37.188 75.260 1.00 18.04
ATOM 2988 CA VAL A 381 15.595 35.812 75.598 1.00 14.91
ATOM 2989 C VAL A 381 15.708 34.897 74.419 1.00 20.31
ATOM 2990 O VAL A 381 16.620 34.091 74.330 1.00 27.64
ATOM 2991 CB VAL A 381 14.408 35.546 76.501 1.00 16.34
ATOM 2992 CG1 VAL A 381 14.284 34.062 76.734 1.00 17.26
ATOM 2993 CG2 VAL A 381 14.687 36.204 77.829 1.00 13.94
ATOM 2994 N PRO A 382 14.797 35.005 73.489 1.00 16.53
ATOM 2995 CA PRO A 382 14.886 34.139 72.324 1.00 17.21
ATOM 2996 C PRO A 382 16.222 34.230 71.634 1.00 24.01
ATOM 2997 O PRO A 382 16.709 33.192 71.207 1.00 27.79

ATOM 2998 CB PRO A 382 13.777 34.514 71.351 1.00 17.20
ATOM 2999 CG PRO A 382 13.003 35.618 72.033 1.00 18.32
ATOM 3000 CD PRO A 382 13.627 35.873 73.399 1.00 12.12
ATOM 3001 N TYR A 383 16.809 35.447 71.542 1.00 19.33
ATOM 3002 CA TYR A 383 18.112 35.648 70.902 1.00 19.70
ATOM 3003 C TYR A 383 19.246 34.953 71.651 1.00 28.79
ATOM 3004 O TYR A 383 19.980 34.117 71.104 1.00 31.38
ATOM 3005 CB TYR A 383 18.468 37.135 70.894 1.00 21.02
ATOM 3006 CG TYR A 383 17.593 37.968 70.011 1.00 23.86
ATOM 3007 CD1 TYR A 383 16.290 38.277 70.404 1.00 28.36
ATOM 3008 CD2 TYR A 383 18.067 38.450 68.784 1.00 20.93
ATOM 3009 CE1 TYR A 383 15.473 39.054 69.576 1.00 30.88
ATOM 3010 CE2 TYR A 383 17.272 39.244 67.957 1.00 18.71
ATOM 3011 CZ TYR A 383 15.967 39.533 68.358 1.00 25.95
ATOM 3012 OH TYR A 383 15.171 40.294 67.556 1.00 30.84
ATOM 3013 N GLU A 384 19.389 35.333 72.921 1.00 20.17
ATOM 3014 CA GLU A 384 20.419 34.857 73.803 1.00 17.57
ATOM 3015 C GLU A 384 20.188 33.506 74.405 1.00 22.88
ATOM 3016 O GLU A 384 21.151 32.775 74.669 1.00 25.65
ATOM 3017 CB GLU A 384 20.833 35.973 74.773 1.00 20.44
ATOM 3018 CG GLU A 384 21.263 37.202 73.944 1.00 15.21
ATOM 3019 CD GLU A 384 22.539 36.937 73.184 1.00 26.58
ATOM 3020 OE1 GLU A 384 23.185 35.915 73.293 1.00 17.84
ATOM 3021 OE2 GLU A 384 22.887 37.915 72.400 1.00 21.88
ATOM 3022 N LYS A 385 18.935 33.116 74.610 1.00 20.33
ATOM 3023 CA LYS A 385 18.736 31.767 75.146 1.00 20.05
ATOM 3024 C LYS A 385 18.865 30.716 74.028 1.00 27.19
ATOM 3025 O LYS A 385 19.420 29.621 74.219 1.00 31.66
ATOM 3026 CB LYS A 385 17.507 31.577 76.014 1.00 21.51
ATOM 3027 CG LYS A 385 17.676 30.384 76.953 1.00 22.29
ATOM 3028 CD LYS A 385 16.386 29.820 77.518 1.00 19.87
ATOM 3029 CE LYS A 385 16.049 30.277 78.937 1.00 31.60
ATOM 3030 NZ LYS A 385 14.783 29.694 79.441 1.00 30.38
ATOM 3031 N GLY A 386 18.364 31.084 72.832 1.00 20.72
ATOM 3032 CA GLY A 386 18.453 30.248 71.637 1.00 17.41
ATOM 3033 C GLY A 386 19.924 30.106 71.298 1.00 20.81
ATOM 3034 O GLY A 386 20.396 29.001 71.225 1.00 22.50
ATOM 3035 N PHE A 387 20.683 31.228 71.163 1.00 20.30
ATOM 3036 CA PHE A 387 22.137 31.158 70.900 1.00 19.92
ATOM 3037 C PHE A 387 22.840 30.263 71.905 1.00 29.09
ATOM 3038 O PHE A 387 23.685 29.478 71.530 1.00 32.80
ATOM 3039 CB PHE A 387 22.852 32.519 70.955 1.00 20.07
ATOM 3040 CG PHE A 387 24.344 32.358 70.872 1.00 19.41
ATOM 3041 CD1 PHE A 387 24.949 32.163 69.631 1.00 19.67
ATOM 3042 CD2 PHE A 387 25.157 32.373 72.007 1.00 25.27
ATOM 3043 CE1 PHE A 387 26.329 31.977 69.525 1.00 20.88
ATOM 3044 CE2 PHE A 387 26.542 32.202 71.916 1.00 28.83
ATOM 3045 CZ PHE A 387 27.131 31.981 70.668 1.00 23.24
ATOM 3046 N ALA A 388 22.495 30.381 73.203 1.00 25.48
ATOM 3047 CA ALA A 388 23.133 29.556 74.242 1.00 23.14
ATOM 3048 C ALA A 388 22.872 28.108 74.055 1.00 32.10
ATOM 3049 O ALA A 388 23.757 27.282 74.258 1.00 37.82
ATOM 3050 CB ALA A 388 22.717 29.932 75.633 1.00 23.02
ATOM 3051 N LEU A 389 21.636 27.793 73.691 1.00 26.31
ATOM 3052 CA LEU A 389 21.275 26.405 73.460 1.00 21.42
ATOM 3053 C LEU A 389 22.189 25.906 72.372 1.00 27.91
ATOM 3054 O LEU A 389 22.865 24.900 72.532 1.00 29.25
ATOM 3055 CB LEU A 389 19.841 26.300 72.937 1.00 19.24
ATOM 3056 CG LEU A 389 19.427 24.868 72.632 1.00 17.17
ATOM 3057 CD1 LEU A 389 19.717 24.017 73.844 1.00 14.63
ATOM 3058 CD2 LEU A 389 17.943 24.808 72.328 1.00 10.16

ATOM 3059 N LEU A 390 22.217 26.659 71.262 1.00 24.49
ATOM 3060 CA LEU A 390 23.050 26.340 70.107 1.00 25.05
ATOM 3061 C LEU A 390 24.531 26.256 70.383 1.00 32.31
ATOM 3062 O LEU A 390 25.183 25.301 69.932 1.00 33.60
ATOM 3063 CB LEU A 390 22.765 27.152 68.844 1.00 23.33
ATOM 3064 CG LEU A 390 21.307 27.026 68.442 1.00 23.38
ATOM 3065 CD1 LEU A 390 20.986 28.025 67.334 1.00 20.84
ATOM 3066 CD2 LEU A 390 20.988 25.591 68.017 1.00 18.86
ATOM 3067 N PHE A 391 25.058 27.231 71.127 1.00 28.52
ATOM 3068 CA PHE A 391 26.480 27.236 71.494 1.00 27.82
ATOM 3069 C PHE A 391 26.813 25.992 72.312 1.00 28.67
ATOM 3070 O PHE A 391 27.839 25.331 72.148 1.00 26.96
ATOM 3071 CB PHE A 391 26.834 28.455 72.341 1.00 28.60
ATOM 3072 CG PHE A 391 28.296 28.786 72.283 1.00 30.53
ATOM 3073 CD1 PHE A 391 28.967 28.816 71.064 1.00 35.08
ATOM 3074 CD2 PHE A 391 29.020 29.063 73.440 1.00 36.52
ATOM 3075 CE1 PHE A 391 30.320 29.142 70.983 1.00 37.61
ATOM 3076 CE2 PHE A 391 30.378 29.383 73.382 1.00 40.61
ATOM 3077 CZ PHE A 391 31.026 29.432 72.148 1.00 37.64
ATOM 3078 N TYR A 392 25.913 25.699 73.225 1.00 24.90
ATOM 3079 CA TYR A 392 26.044 24.550 74.065 1.00 24.66
ATOM 3080 C TYR A 392 26.106 23.298 73.186 1.00 34.30
ATOM 3081 O TYR A 392 27.058 22.558 73.268 1.00 37.51
ATOM 3082 CB TYR A 392 24.821 24.501 74.967 1.00 26.39
ATOM 3083 CG TYR A 392 24.631 23.181 75.678 1.00 31.99
ATOM 3084 CD1 TYR A 392 25.546 22.715 76.625 1.00 35.17
ATOM 3085 CD2 TYR A 392 23.501 22.397 75.432 1.00 32.49
ATOM 3086 CE1 TYR A 392 25.341 21.512 77.306 1.00 39.01
ATOM 3087 CE2 TYR A 392 23.281 21.184 76.094 1.00 31.50
ATOM 3088 CZ TYR A 392 24.206 20.743 77.035 1.00 34.08
ATOM 3089 OH TYR A 392 23.986 19.564 77.683 1.00 36.46
ATOM 3090 N LEU A 393 25.101 23.067 72.310 1.00 31.02
ATOM 3091 CA LEU A 393 25.043 21.889 71.410 1.00 29.65
ATOM 3092 C LEU A 393 26.274 21.616 70.507 1.00 32.03
ATOM 3093 O LEU A 393 26.664 20.468 70.267 1.00 27.90
ATOM 3094 CB LEU A 393 23.758 21.905 70.552 1.00 28.85
ATOM 3095 CG LEU A 393 22.489 21.688 71.375 1.00 30.33
ATOM 3096 CD1 LEU A 393 21.256 22.047 70.559 1.00 27.38
ATOM 3097 CD2 LEU A 393 22.400 20.246 71.865 1.00 29.76
ATOM 3098 N GLU A 394 26.841 22.701 69.980 1.00 30.84
ATOM 3099 CA GLU A 394 28.000 22.727 69.118 1.00 30.05
ATOM 3100 C GLU A 394 29.210 22.214 69.868 1.00 39.16
ATOM 3101 O GLU A 394 30.089 21.595 69.299 1.00 42.14
ATOM 3102 CB GLU A 394 28.300 24.204 68.756 1.00 31.03
ATOM 3103 CG GLU A 394 29.776 24.406 68.376 1.00 37.11
ATOM 3104 CD GLU A 394 30.182 25.830 68.208 1.00 45.20
ATOM 3105 OE1 GLU A 394 29.614 26.609 67.471 1.00 56.77
ATOM 3106 OE2 GLU A 394 31.229 26.133 68.927 1.00 39.77
ATOM 3107 N GLN A 395 29.256 22.534 71.160 1.00 34.20
ATOM 3108 CA GLN A 395 30.342 22.139 72.029 1.00 32.86
ATOM 3109 C GLN A 395 30.143 20.690 72.435 1.00 38.65
ATOM 3110 O GLN A 395 31.066 19.899 72.507 1.00 38.67
ATOM 3111 CB GLN A 395 30.474 23.051 73.287 1.00 33.17
ATOM 3112 CG GLN A 395 30.831 24.540 72.996 1.00 13.79
ATOM 3113 CD GLN A 395 31.176 25.354 74.247 1.00 37.45
ATOM 3114 OE1 GLN A 395 30.909 24.959 75.407 1.00 26.89
ATOM 3115 NE2 GLN A 395 31.758 26.523 74.010 1.00 31.99
ATOM 3116 N LEU A 396 28.903 20.352 72.682 1.00 38.68
ATOM 3117 CA LEU A 396 28.514 19.015 73.083 1.00 38.49
ATOM 3118 C LEU A 396 28.633 18.017 71.924 1.00 39.28
ATOM 3119 O LEU A 396 29.012 16.871 72.100 1.00 42.17

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ATOM	3120	CB	LEU	A	396	27.055	19.072	73.628	1.00	37.93
ATOM	3121	CG	LEU	A	396	26.389	17.732	73.946	1.00	42.72
ATOM	3122	CD1	LEU	A	396	26.436	17.489	75.445	1.00	45.42
ATOM	3123	CD2	LEU	A	396	24.917	17.709	73.527	1.00	43.81
ATOM	3124	N	LEU	A	397	28.303	18.456	70.730	1.00	28.48
ATOM	3125	CA	LEU	A	397	28.337	17.595	69.589	1.00	25.49
ATOM	3126	C	LEU	A	397	29.620	17.609	68.771	1.00	36.86
ATOM	3127	O	LEU	A	397	29.596	17.220	67.599	1.00	39.85
ATOM	3128	CB	LEU	A	397	27.156	17.924	68.686	1.00	23.73
ATOM	3129	CG	LEU	A	397	25.843	17.773	69.401	1.00	25.82
ATOM	3130	CD1	LEU	A	397	24.740	18.559	68.669	1.00	22.99
ATOM	3131	CD2	LEU	A	397	25.525	16.272	69.452	1.00	27.30
ATOM	3132	N	GLY	A	398	30.731	18.069	69.342	1.00	33.98
ATOM	3133	CA	GLY	A	398	31.993	18.038	68.617	1.00	34.14
ATOM	3134	C	GLY	A	398	32.547	19.260	67.889	1.00	38.92
ATOM	3135	O	GLY	A	398	33.502	19.097	67.115	1.00	39.98
ATOM	3136	N	GLY	A	399	32.001	20.457	68.105	1.00	33.01
ATOM	3137	CA	GLY	A	399	32.543	21.650	67.440	1.00	30.35
ATOM	3138	C	GLY	A	399	31.713	22.336	66.365	1.00	31.72
ATOM	3139	O	GLY	A	399	30.800	21.823	65.762	1.00	34.57
ATOM	3140	N	PRO	A	400	32.076	23.550	66.124	1.00	33.01
ATOM	3141	CA	PRO	A	400	31.429	24.406	65.151	1.00	35.02
ATOM	3142	C	PRO	A	400	31.379	23.794	63.750	1.00	43.93
ATOM	3143	O	PRO	A	400	30.360	23.838	63.045	1.00	40.14
ATOM	3144	CB	PRO	A	400	32.293	25.672	65.111	1.00	35.73
ATOM	3145	CG	PRO	A	400	33.539	25.411	65.948	1.00	38.03
ATOM	3146	CD	PRO	A	400	33.423	24.010	66.517	1.00	33.92
ATOM	3147	N	GLU	A	401	32.512	23.237	63.345	1.00	43.85
ATOM	3148	CA	GLU	A	401	32.597	22.620	62.042	1.00	42.92
ATOM	3149	C	GLU	A	401	31.491	21.587	61.878	1.00	37.92
ATOM	3150	O	GLU	A	401	30.810	21.588	60.866	1.00	33.79
ATOM	3151	CB	GLU	A	401	33.996	22.034	61.789	1.00	45.93
ATOM	3152	CG	GLU	A	401	34.578	22.372	60.398	1.00	69.62
ATOM	3153	CD	GLU	A	401	35.603	21.373	59.911	1.00	100.00
ATOM	3154	OE1	GLU	A	401	36.702	21.236	60.427	1.00	100.00
ATOM	3155	OE2	GLU	A	401	35.195	20.689	58.865	1.00	93.16
ATOM	3156	N	ILE	A	402	31.317	20.720	62.902	1.00	34.58
ATOM	3157	CA	ILE	A	402	30.281	19.681	62.922	1.00	33.20
ATOM	3158	C	ILE	A	402	28.898	20.291	62.938	1.00	39.09
ATOM	3159	O	ILE	A	402	28.065	19.896	62.133	1.00	41.43
ATOM	3160	CB	ILE	A	402	30.391	18.673	64.078	1.00	33.82
ATOM	3161	CG1	ILE	A	402	31.490	17.661	63.811	1.00	34.70
ATOM	3162	CG2	ILE	A	402	29.080	17.900	64.287	1.00	23.32
ATOM	3163	CD1	ILE	A	402	31.878	16.896	65.080	1.00	49.20
ATOM	3164	N	PHE	A	403	28.668	21.246	63.868	1.00	32.73
ATOM	3165	CA	PHE	A	403	27.390	21.952	64.044	1.00	29.52
ATOM	3166	C	PHE	A	403	27.032	22.816	62.836	1.00	33.94
ATOM	3167	O	PHE	A	403	25.866	23.022	62.469	1.00	34.15
ATOM	3168	CB	PHE	A	403	27.319	22.719	65.381	1.00	29.03
ATOM	3169	CG	PHE	A	403	25.917	22.783	65.929	1.00	28.54
ATOM	3170	CD1	PHE	A	403	25.323	21.643	66.484	1.00	29.91
ATOM	3171	CD2	PHE	A	403	25.176	23.964	65.873	1.00	27.62
ATOM	3172	CE1	PHE	A	403	24.021	21.667	66.990	1.00	27.38
ATOM	3173	CE2	PHE	A	403	23.881	24.017	66.393	1.00	28.82
ATOM	3174	CZ	PHE	A	403	23.304	22.863	66.932	1.00	25.72
ATOM	3175	N	LEU	A	404	28.040	23.327	62.165	1.00	31.31
ATOM	3176	CA	LEU	A	404	27.687	24.080	60.983	1.00	32.95
ATOM	3177	C	LEU	A	404	27.068	23.099	59.952	1.00	32.89
ATOM	3178	O	LEU	A	404	26.050	23.361	59.315	1.00	37.36
ATOM	3179	CB	LEU	A	404	28.798	25.045	60.464	1.00	33.15
ATOM	3180	CG	LEU	A	404	29.029	26.208	61.444	1.00	36.96

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ATOM   3181  CD1 LEU A 404      30.454  26.717  61.353  1.00 37.13
ATOM   3182  CD2 LEU A 404      28.083  27.362  61.163  1.00 39.27
ATOM   3183  N   GLY A 405      27.670  21.921  59.826  1.00 22.02
ATOM   3184  CA  GLY A 405      27.167  20.908  58.928  1.00 22.77
ATOM   3185  C   GLY A 405      25.698  20.676  59.206  1.00 31.85
ATOM   3186  O   GLY A 405      24.885  20.438  58.297  1.00 33.01
ATOM   3187  N   PHE A 406      25.364  20.747  60.493  1.00 26.28
ATOM   3188  CA  PHE A 406      23.992  20.565  60.863  1.00 25.27
ATOM   3189  C   PHE A 406      23.188  21.757  60.365  1.00 34.80
ATOM   3190  O   PHE A 406      22.195  21.629  59.638  1.00 36.22
ATOM   3191  CB  PHE A 406      23.798  20.268  62.351  1.00 24.52
ATOM   3192  CG  PHE A 406      22.388  20.525  62.798  1.00 24.82
ATOM   3193  CD1 PHE A 406      21.328  19.734  62.353  1.00 28.50
ATOM   3194  CD2 PHE A 406      22.107  21.579  63.669  1.00 30.12
ATOM   3195  CE1 PHE A 406      20.025  19.977  62.793  1.00 31.40
ATOM   3196  CE2 PHE A 406      20.810  21.862  64.105  1.00 32.57
ATOM   3197  CZ  PHE A 406      19.771  21.037  63.669  1.00 31.88
ATOM   3198  N   LEU A 407      23.661  22.934  60.708  1.00 32.11
ATOM   3199  CA  LEU A 407      22.972  24.132  60.269  1.00 33.11
ATOM   3200  C   LEU A 407      22.706  24.204  58.767  1.00 34.74
ATOM   3201  O   LEU A 407      21.635  24.615  58.341  1.00 35.21
ATOM   3202  CB  LEU A 407      23.589  25.420  60.840  1.00 35.36
ATOM   3203  CG  LEU A 407      22.597  26.577  60.855  1.00 41.79
ATOM   3204  CD1 LEU A 407      23.048  27.626  61.833  1.00 40.45
ATOM   3205  CD2 LEU A 407      22.513  27.197  59.461  1.00 49.57
ATOM   3206  N   LYS A 408      23.667  23.804  57.948  1.00 34.92
ATOM   3207  CA  LYS A 408      23.476  23.826  56.490  1.00 36.29
ATOM   3208  C   LYS A 408      22.378  22.876  56.037  1.00 38.15
ATOM   3209  O   LYS A 408      21.568  23.191  55.160  1.00 35.09
ATOM   3210  CB  LYS A 408      24.747  23.517  55.707  1.00 40.54
ATOM   3211  CG  LYS A 408      24.633  23.873  54.214  1.00 43.41
ATOM   3212  CD  LYS A 408      25.950  23.796  53.422  1.00 49.26
ATOM   3213  CE  LYS A 408      26.808  25.059  53.459  1.00 61.45
ATOM   3214  NZ  LYS A 408      28.014  24.994  52.606  1.00 73.78
ATOM   3215  N   ALA A 409      22.352  21.690  56.655  1.00 35.34
ATOM   3216  CA  ALA A 409      21.333  20.698  56.298  1.00 36.14
ATOM   3217  C   ALA A 409      19.927  21.041  56.814  1.00 38.45
ATOM   3218  O   ALA A 409      18.913  20.821  56.134  1.00 37.39
ATOM   3219  CB  ALA A 409      21.762  19.273  56.626  1.00 36.66
ATOM   3220  N   TYR A 410      19.902  21.597  58.030  1.00 33.14
ATOM   3221  CA  TYR A 410      18.693  22.059  58.682  1.00 29.65
ATOM   3222  C   TYR A 410      18.028  23.051  57.730  1.00 35.55
ATOM   3223  O   TYR A 410      16.855  22.976  57.399  1.00 37.26
ATOM   3224  CB  TYR A 410      19.117  22.762  59.970  1.00 24.67
ATOM   3225  CG  TYR A 410      18.069  23.643  60.541  1.00 26.95
ATOM   3226  CD1 TYR A 410      16.861  23.112  60.990  1.00 28.10
ATOM   3227  CD2 TYR A 410      18.288  25.015  60.663  1.00 29.66
ATOM   3228  CE1 TYR A 410      15.883  23.924  61.571  1.00 26.98
ATOM   3229  CE2 TYR A 410      17.316  25.839  61.230  1.00 31.84
ATOM   3230  CZ  TYR A 410      16.112  25.294  61.685  1.00 37.49
ATOM   3231  OH  TYR A 410      15.156  26.110  62.241  1.00 33.48
ATOM   3232  N   VAL A 411      18.848  23.961  57.262  1.00 28.75
ATOM   3233  CA  VAL A 411      18.457  24.984  56.341  1.00 29.23
ATOM   3234  C   VAL A 411      18.013  24.469  54.992  1.00 34.00
ATOM   3235  O   VAL A 411      17.060  24.982  54.401  1.00 30.00
ATOM   3236  CB  VAL A 411      19.617  25.922  56.139  1.00 32.22
ATOM   3237  CG1 VAL A 411      19.331  26.821  54.950  1.00 29.86
ATOM   3238  CG2 VAL A 411      19.850  26.708  57.431  1.00 31.69
ATOM   3239  N   GLU A 412      18.730  23.479  54.488  1.00 33.14
ATOM   3240  CA  GLU A 412      18.402  22.900  53.217  1.00 31.91
ATOM   3241  C   GLU A 412      17.068  22.163  53.355  1.00 30.32
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ATOM 3242 O GLU A 412 16.182 22.225 52.531 1.00 31.89
ATOM 3243 CB GLU A 412 19.502 21.883 52.932 1.00 36.48
ATOM 3244 CG GLU A 412 20.443 22.174 51.737 1.00 67.01
ATOM 3245 CD GLU A 412 21.872 21.699 51.962 1.00100.00
ATOM 3246 OE1 GLU A 412 22.193 20.782 52.716 1.00100.00
ATOM 3247 OE2 GLU A 412 22.750 22.396 51.277 1.00 94.73
ATOM 3248 N LYS A 413 16.922 21.444 54.444 1.00 22.18
ATOM 3249 CA LYS A 413 15.729 20.692 54.714 1.00 17.91
ATOM 3250 C LYS A 413 14.463 21.486 54.855 1.00 23.75
ATOM 3251 O LYS A 413 13.417 20.978 54.503 1.00 25.92
ATOM 3252 CB LYS A 413 15.890 19.911 55.988 1.00 15.65
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ATOM 3256 NZ LYS A 413 13.457 15.751 56.381 1.00 73.89
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ATOM 3259 C PHE A 414 13.151 24.748 54.821 1.00 35.82
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ATOM 3263 CD1 PHE A 414 11.746 21.826 57.996 1.00 35.94
ATOM 3264 CD2 PHE A 414 14.005 22.110 58.742 1.00 37.75
ATOM 3265 CE1 PHE A 414 11.629 20.664 58.761 1.00 37.77
ATOM 3266 CE2 PHE A 414 13.888 20.962 59.526 1.00 42.23
ATOM 3267 CZ PHE A 414 12.698 20.231 59.542 1.00 39.10
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ATOM 3269 CA SER A 415 13.858 26.115 52.945 1.00 36.36
ATOM 3270 C SER A 415 12.412 26.295 52.510 1.00 38.99
ATOM 3271 O SER A 415 11.730 25.315 52.243 1.00 41.04
ATOM 3272 CB SER A 415 14.773 26.008 51.736 1.00 37.43
ATOM 3273 OG SER A 415 16.036 26.566 52.046 1.00 46.73
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ATOM 3277 O TYR A 416 8.295 27.095 52.546 1.00 33.44
ATOM 3278 CB TYR A 416 10.292 27.479 50.584 1.00 28.42
ATOM 3279 CG TYR A 416 11.496 27.782 49.723 1.00 24.76
ATOM 3280 CD1 TYR A 416 11.791 29.087 49.338 1.00 26.55
ATOM 3281 CD2 TYR A 416 12.375 26.778 49.335 1.00 21.68
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ATOM 3283 CE2 TYR A 416 13.504 27.052 48.572 1.00 20.15
ATOM 3284 CZ TYR A 416 13.780 28.360 48.189 1.00 30.62
ATOM 3285 OH TYR A 416 14.892 28.616 47.399 1.00 35.15
ATOM 3286 N LYS A 417 9.823 26.713 54.122 1.00 27.67
ATOM 3287 CA LYS A 417 8.889 26.065 55.008 1.00 28.02
ATOM 3288 C LYS A 417 8.733 26.830 56.317 1.00 31.36
ATOM 3289 O LYS A 417 9.547 27.671 56.682 1.00 33.15
ATOM 3290 CB LYS A 417 9.335 24.615 55.252 1.00 33.86
ATOM 3291 CG LYS A 417 8.449 23.792 56.201 1.00 86.28
ATOM 3292 CD LYS A 417 8.742 22.275 56.232 1.00100.00
ATOM 3293 CE LYS A 417 7.924 21.471 57.265 1.00 72.28
ATOM 3294 NZ LYS A 417 8.280 20.033 57.323 1.00 41.88
ATOM 3295 N SER A 418 7.668 26.557 57.033 1.00 28.88
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ATOM 3297 C SER A 418 7.425 26.064 59.332 1.00 34.09
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ATOM 3299 CB SER A 418 6.261 28.126 58.410 1.00 31.46
ATOM 3300 OG SER A 418 6.417 29.106 57.399 1.00 35.01
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ATOM 3302 CA ILE A 419 8.446 24.971 61.205 1.00 23.86

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ATOM   3304  O   ILE A 419       8.122  26.500  63.002  1.00 21.64
ATOM   3305  CB  ILE A 419       9.803  24.314  61.026  1.00 25.02
ATOM   3306  CG1 ILE A 419      10.863  25.325  61.399  1.00 23.63
ATOM   3307  CG2 ILE A 419      10.051  23.937  59.565  1.00 23.22
ATOM   3308  CD1 ILE A 419      12.236  24.688  61.253  1.00 23.48
ATOM   3309  N   THR A 420       8.321  24.302  63.455  1.00 24.71
ATOM   3310  CA  THR A 420       8.201  24.417  64.895  1.00 24.36
ATOM   3311  C   THR A 420       9.416  23.795  65.538  1.00 28.90
ATOM   3312  O   THR A 420      10.190  23.112  64.863  1.00 23.38
ATOM   3313  CB  THR A 420       6.979  23.691  65.448  1.00 24.92
ATOM   3314  OG1 THR A 420       7.190  22.313  65.291  1.00 26.43
ATOM   3315  CG2 THR A 420       5.728  24.082  64.694  1.00 31.57
ATOM   3316  N   THR A 421       9.542  24.051  66.855  1.00 29.30
ATOM   3317  CA  THR A 421      10.610  23.549  67.709  1.00 27.78
ATOM   3318  C   THR A 421      10.831  22.035  67.585  1.00 30.99
ATOM   3319  O   THR A 421      11.975  21.594  67.489  1.00 33.28
ATOM   3320  CB  THR A 421      10.394  23.969  69.166  1.00 21.94
ATOM   3321  OG1 THR A 421      10.567  25.369  69.263  1.00 24.52
ATOM   3322  CG2 THR A 421      11.399  23.221  70.045  1.00 20.12
ATOM   3323  N   ASP A 422       9.721  21.272  67.575  1.00 21.94
ATOM   3324  CA  ASP A 422       9.706  19.823  67.430  1.00 21.08
ATOM   3325  C   ASP A 422      10.323  19.401  66.104  1.00 31.16
ATOM   3326  O   ASP A 422      11.110  18.427  66.027  1.00 31.95
ATOM   3327  CB  ASP A 422       8.276  19.278  67.561  1.00 19.49
ATOM   3328  CG  ASP A 422       8.236  17.802  67.298  1.00 31.85
ATOM   3329  OD1 ASP A 422       9.130  17.040  67.654  1.00 29.73
ATOM   3330  OD2 ASP A 422       7.197  17.415  66.598  1.00 56.60
ATOM   3331  N   ASP A 423       9.957  20.146  65.049  1.00 26.75
ATOM   3332  CA  ASP A 423      10.505  19.876  63.729  1.00 26.01
ATOM   3333  C   ASP A 423      12.027  19.957  63.830  1.00 40.09
ATOM   3334  O   ASP A 423      12.753  19.020  63.500  1.00 47.09
ATOM   3335  CB  ASP A 423      10.000  20.833  62.631  1.00 24.86
ATOM   3336  CG  ASP A 423       8.538  20.722  62.343  1.00 39.90
ATOM   3337  OD1 ASP A 423       7.968  19.649  62.299  1.00 45.03
ATOM   3338  OD2 ASP A 423       7.943  21.887  62.113  1.00 40.43
ATOM   3339  N   TRP A 424      12.493  21.099  64.320  1.00 31.92
ATOM   3340  CA  TRP A 424      13.903  21.372  64.495  1.00 29.69
ATOM   3341  C   TRP A 424      14.611  20.271  65.282  1.00 33.81
ATOM   3342  O   TRP A 424      15.537  19.616  64.824  1.00 35.87
ATOM   3343  CB  TRP A 424      14.056  22.711  65.239  1.00 26.11
ATOM   3344  CG  TRP A 424      15.431  22.869  65.786  1.00 27.05
ATOM   3345  CD1 TRP A 424      16.518  23.302  65.101  1.00 29.65
ATOM   3346  CD2 TRP A 424      15.885  22.587  67.119  1.00 26.62
ATOM   3347  NE1 TRP A 424      17.612  23.321  65.922  1.00 27.83
ATOM   3348  CE2 TRP A 424      17.257  22.891  67.163  1.00 28.62
ATOM   3349  CE3 TRP A 424      15.260  22.138  68.269  1.00 29.69
ATOM   3350  CZ2 TRP A 424      18.010  22.758  68.319  1.00 29.28
ATOM   3351  CZ3 TRP A 424      16.000  21.993  69.429  1.00 33.50
ATOM   3352  CH2 TRP A 424      17.362  22.317  69.459  1.00 33.93
ATOM   3353  N   LYS A 425      14.156  20.090  66.497  1.00 28.75
ATOM   3354  CA  LYS A 425      14.723  19.105  67.373  1.00 29.43
ATOM   3355  C   LYS A 425      14.697  17.691  66.808  1.00 29.49
ATOM   3356  O   LYS A 425      15.627  16.928  67.030  1.00 27.65
ATOM   3357  CB  LYS A 425      14.078  19.171  68.744  1.00 29.70
ATOM   3358  CG  LYS A 425      14.860  18.414  69.787  1.00 28.11
ATOM   3359  CD  LYS A 425      14.161  18.409  71.132  1.00 23.57
ATOM   3360  CE  LYS A 425      14.300  17.063  71.815  1.00 36.16
ATOM   3361  NZ  LYS A 425      13.042  16.302  71.768  1.00 58.08
ATOM   3362  N   ASP A 426      13.606  17.361  66.107  1.00 19.05
ATOM   3363  CA  ASP A 426      13.417  16.070  65.516  1.00 18.43
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ATOM 3364 C ASP A 426 14.453 15.879 64.387 1.00 28.33
ATOM 3365 O ASP A 426 15.070 14.832 64.232 1.00 31.25
ATOM 3366 CB ASP A 426 11.920 15.840 65.098 1.00 19.79
ATOM 3367 CG ASP A 426 10.998 15.575 66.274 1.00 25.54
ATOM 3368 OD1 ASP A 426 11.341 15.466 67.409 1.00 29.73
ATOM 3369 OD2 ASP A 426 9.804 15.611 65.938 1.00 20.67
ATOM 3370 N PHE A 427 14.674 16.926 63.612 1.00 25.09
ATOM 3371 CA PHE A 427 15.654 16.899 62.540 1.00 25.81
ATOM 3372 C PHE A 427 17.066 16.718 63.159 1.00 34.01
ATOM 3373 O PHE A 427 17.843 15.851 62.773 1.00 36.25
ATOM 3374 CB PHE A 427 15.589 18.197 61.704 1.00 26.35
ATOM 3375 CG PHE A 427 16.698 18.202 60.702 1.00 27.40
ATOM 3376 CD1 PHE A 427 16.714 17.247 59.686 1.00 29.97
ATOM 3377 CD2 PHE A 427 17.773 19.084 60.805 1.00 28.71
ATOM 3378 CE1 PHE A 427 17.730 17.194 58.733 1.00 27.72
ATOM 3379 CE2 PHE A 427 18.806 19.046 59.867 1.00 30.37
ATOM 3380 CZ PHE A 427 18.780 18.104 58.837 1.00 26.34
ATOM 3381 N LEU A 428 17.369 17.544 64.160 1.00 28.94
ATOM 3382 CA LEU A 428 18.622 17.496 64.924 1.00 27.74
ATOM 3383 C LEU A 428 18.989 16.047 65.303 1.00 32.08
ATOM 3384 O LEU A 428 20.145 15.647 65.209 1.00 36.38
ATOM 3385 CB LEU A 428 18.510 18.362 66.223 1.00 24.68
ATOM 3386 CG LEU A 428 19.778 18.377 67.079 1.00 24.30
ATOM 3387 CD1 LEU A 428 20.855 19.278 66.467 1.00 23.00
ATOM 3388 CD2 LEU A 428 19.446 18.856 68.481 1.00 16.41
ATOM 3389 N TYR A 429 17.991 15.271 65.735 1.00 23.71
ATOM 3390 CA TYR A 429 18.148 13.896 66.144 1.00 23.18
ATOM 3391 C TYR A 429 18.311 12.967 64.976 1.00 26.62
ATOM 3392 O TYR A 429 18.911 11.910 65.076 1.00 28.43
ATOM 3393 CB TYR A 429 16.921 13.453 66.914 1.00 25.59
ATOM 3394 CG TYR A 429 17.069 13.526 68.414 1.00 29.53
ATOM 3395 CD1 TYR A 429 16.823 14.714 69.114 1.00 31.11
ATOM 3396 CD2 TYR A 429 17.361 12.383 69.156 1.00 32.70
ATOM 3397 CE1 TYR A 429 16.916 14.769 70.510 1.00 32.23
ATOM 3398 CE2 TYR A 429 17.485 12.420 70.551 1.00 35.30
ATOM 3399 CZ TYR A 429 17.251 13.623 71.231 1.00 41.02
ATOM 3400 OH TYR A 429 17.339 13.679 72.609 1.00 30.02
ATOM 3401 N SER A 430 17.748 13.342 63.854 1.00 21.68
ATOM 3402 CA SER A 430 17.914 12.469 62.730 1.00 23.42
ATOM 3403 C SER A 430 19.264 12.722 62.050 1.00 32.87
ATOM 3404 O SER A 430 19.879 11.819 61.467 1.00 35.11
ATOM 3405 CB SER A 430 16.756 12.541 61.773 1.00 28.79
ATOM 3406 OG SER A 430 17.089 13.475 60.777 1.00 49.56
ATOM 3407 N TYR A 431 19.748 13.955 62.132 1.00 27.18
ATOM 3408 CA TYR A 431 21.017 14.296 61.537 1.00 27.14
ATOM 3409 C TYR A 431 22.152 13.702 62.316 1.00 32.52
ATOM 3410 O TYR A 431 23.155 13.242 61.771 1.00 33.64
ATOM 3411 CB TYR A 431 21.216 15.818 61.385 1.00 31.07
ATOM 3412 CG TYR A 431 22.566 16.265 60.812 1.00 35.63
ATOM 3413 CD1 TYR A 431 23.663 16.492 61.650 1.00 36.88
ATOM 3414 CD2 TYR A 431 22.735 16.496 59.444 1.00 36.92
ATOM 3415 CE1 TYR A 431 24.894 16.924 61.157 1.00 33.78
ATOM 3416 CE2 TYR A 431 23.964 16.916 58.924 1.00 37.86
ATOM 3417 CZ TYR A 431 25.038 17.143 59.786 1.00 46.01
ATOM 3418 OH TYR A 431 26.247 17.573 59.294 1.00 51.28
ATOM 3419 N PHE A 432 21.964 13.728 63.606 1.00 29.66
ATOM 3420 CA PHE A 432 22.939 13.215 64.526 1.00 29.12
ATOM 3421 C PHE A 432 22.522 11.865 65.007 1.00 42.64
ATOM 3422 O PHE A 432 22.499 11.593 66.197 1.00 46.77
ATOM 3423 CB PHE A 432 23.063 14.157 65.719 1.00 30.24
ATOM 3424 CG PHE A 432 23.962 15.327 65.401 1.00 33.03

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ATOM   3425  CD1 PHE A 432      25.336  15.113  65.277  1.00 37.22
ATOM   3426  CD2 PHE A 432      23.470  16.624  65.232  1.00 30.70
ATOM   3427  CE1 PHE A 432      26.223  16.153  64.999  1.00 34.27
ATOM   3428  CE2 PHE A 432      24.349  17.667  64.938  1.00 31.71
ATOM   3429  CZ  PHE A 432      25.722  17.438  64.823  1.00 27.82
ATOM   3430  N   LYS A 433      22.174  11.029  64.063  1.00 42.50
ATOM   3431  CA  LYS A 433      21.669   9.670  64.270  1.00 40.87
ATOM   3432  C   LYS A 433      22.718   8.751  64.908  1.00 46.17
ATOM   3433  O   LYS A 433      22.405   7.734  65.513  1.00 48.48
ATOM   3434  CB  LYS A 433      21.245   9.106  62.917  1.00 39.25
ATOM   3435  CG  LYS A 433      19.988   8.241  63.017  1.00 84.17
ATOM   3436  CD  LYS A 433      18.925   8.660  62.000  1.00100.00
ATOM   3437  CE  LYS A 433      17.523   8.172  62.384  1.00100.00
ATOM   3438  NZ  LYS A 433      16.525   9.119  61.884  1.00100.00
ATOM   3439  N   ASP A 434      24.002   9.112  64.697  1.00 45.20
ATOM   3440  CA  ASP A 434      25.083   8.349  65.321  1.00 47.80
ATOM   3441  C   ASP A 434      25.201   8.684  66.802  1.00 50.78
ATOM   3442  O   ASP A 434      25.474   7.845  67.653  1.00 55.76
ATOM   3443  CB  ASP A 434      26.405   8.567  64.562  1.00 53.91
ATOM   3444  CG  ASP A 434      26.123   8.474  63.069  1.00 93.32
ATOM   3445  OD1 ASP A 434      25.744   7.573  62.325  1.00 96.22
ATOM   3446  OD2 ASP A 434      26.119   9.664  62.753  1.00100.00
ATOM   3447  N   LYS A 435      25.015   9.978  67.085  1.00 38.82
ATOM   3448  CA  LYS A 435      24.974  10.404  68.468  1.00 34.57
ATOM   3449  C   LYS A 435      23.549  10.749  68.881  1.00 39.87
ATOM   3450  O   LYS A 435      23.070  11.840  68.693  1.00 40.34
ATOM   3451  CB  LYS A 435      25.864  11.631  68.615  1.00 34.69
ATOM   3452  CG  LYS A 435      27.064  11.595  67.679  1.00 40.86
ATOM   3453  CD  LYS A 435      27.703  12.975  67.532  1.00 51.04
ATOM   3454  CE  LYS A 435      29.242  12.904  67.557  1.00 24.08
ATOM   3455  NZ  LYS A 435      29.822  13.990  66.760  1.00 45.26
ATOM   3456  N   VAL A 436      22.843   9.728  69.414  1.00 38.07
ATOM   3457  CA  VAL A 436      21.601  10.036  70.111  1.00 36.86
ATOM   3458  C   VAL A 436      21.846  10.129  71.608  1.00 44.88
ATOM   3459  O   VAL A 436      21.289  10.948  72.300  1.00 46.42
ATOM   3460  CB  VAL A 436      20.567   8.923  69.816  1.00 37.37
ATOM   3461  CG1 VAL A 436      19.944   9.143  68.446  1.00 36.24
ATOM   3462  CG2 VAL A 436      21.227   7.556  69.854  1.00 36.80
ATOM   3463  N   ASP A 437      22.718   9.232  72.099  1.00 43.61
ATOM   3464  CA  ASP A 437      23.044   9.222  73.522  1.00 41.43
ATOM   3465  C   ASP A 437      23.657  10.546  73.958  1.00 45.71
ATOM   3466  O   ASP A 437      23.554  10.956  75.107  1.00 49.89
ATOM   3467  CB  ASP A 437      24.022   8.082  73.776  1.00 43.84
ATOM   3468  CG  ASP A 437      23.281   6.752  73.691  1.00 72.47
ATOM   3469  OD1 ASP A 437      22.062   6.769  73.823  1.00 74.64
ATOM   3470  OD2 ASP A 437      23.933   5.730  73.481  1.00 86.09
ATOM   3471  N   VAL A 438      24.333  11.324  73.122  1.00 40.21
ATOM   3472  CA  VAL A 438      24.807  12.624  73.577  1.00 40.97
ATOM   3473  C   VAL A 438      23.621  13.582  73.668  1.00 41.86
ATOM   3474  O   VAL A 438      23.368  14.276  74.657  1.00 39.95
ATOM   3475  CB  VAL A 438      25.875  13.165  72.615  1.00 47.47
ATOM   3476  CG1 VAL A 438      26.438  14.523  73.051  1.00 47.51
ATOM   3477  CG2 VAL A 438      26.996  12.149  72.440  1.00 47.51
ATOM   3478  N   LEU A 439      22.876  13.595  72.585  1.00 37.91
ATOM   3479  CA  LEU A 439      21.729  14.442  72.507  1.00 36.21
ATOM   3480  C   LEU A 439      20.850  14.190  73.695  1.00 40.03
ATOM   3481  O   LEU A 439      20.214  15.064  74.255  1.00 42.22
ATOM   3482  CB  LEU A 439      20.949  14.180  71.210  1.00 33.84
ATOM   3483  CG  LEU A 439      21.552  14.939  70.039  1.00 32.80
ATOM   3484  CD1 LEU A 439      20.813  14.538  68.775  1.00 34.08
ATOM   3485  CD2 LEU A 439      21.435  16.434  70.258  1.00 23.80
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ATOM	3486	N	ASN	A	440	20.810	12.953	74.076	1.00	34.03
ATOM	3487	CA	ASN	A	440	19.971	12.603	75.187	1.00	34.00
ATOM	3488	C	ASN	A	440	20.494	13.093	76.532	1.00	40.95
ATOM	3489	O	ASN	A	440	19.816	12.995	77.544	1.00	42.09
ATOM	3490	CB	ASN	A	440	19.681	11.095	75.178	1.00	24.89
ATOM	3491	CG	ASN	A	440	18.790	10.635	74.028	1.00	46.52
ATOM	3492	OD1	ASN	A	440	19.005	9.537	73.480	1.00	58.82
ATOM	3493	ND2	ASN	A	440	17.769	11.440	73.680	1.00	31.11
ATOM	3494	N	GLN	A	441	21.707	13.623	76.531	1.00	36.98
ATOM	3495	CA	GLN	A	441	22.339	14.095	77.744	1.00	35.47
ATOM	3496	C	GLN	A	441	21.879	15.478	78.067	1.00	36.00
ATOM	3497	O	GLN	A	441	22.137	16.029	79.142	1.00	34.96
ATOM	3498	CB	GLN	A	441	23.878	14.109	77.581	1.00	38.10
ATOM	3499	CG	GLN	A	441	24.504	12.692	77.422	1.00	52.06
ATOM	3500	CD	GLN	A	441	25.954	12.730	76.955	1.00	81.69
ATOM	3501	OE1	GLN	A	441	26.476	13.796	76.609	1.00	74.46
ATOM	3502	NE2	GLN	A	441	26.616	11.574	76.972	1.00	91.09
ATOM	3503	N	VAL	A	442	21.197	16.067	77.112	1.00	31.86
ATOM	3504	CA	VAL	A	442	20.753	17.411	77.384	1.00	32.78
ATOM	3505	C	VAL	A	442	19.354	17.468	77.970	1.00	38.24
ATOM	3506	O	VAL	A	442	18.468	16.700	77.588	1.00	42.83
ATOM	3507	CB	VAL	A	442	20.845	18.277	76.159	1.00	34.84
ATOM	3508	CG1	VAL	A	442	21.430	17.435	75.020	1.00	34.65
ATOM	3509	CG2	VAL	A	442	19.441	18.705	75.811	1.00	33.21
ATOM	3510	N	ASP	A	443	19.172	18.388	78.908	1.00	25.60
ATOM	3511	CA	ASP	A	443	17.931	18.634	79.616	1.00	24.57
ATOM	3512	C	ASP	A	443	16.996	19.533	78.791	1.00	32.14
ATOM	3513	O	ASP	A	443	16.744	20.732	79.073	1.00	34.77
ATOM	3514	CB	ASP	A	443	18.332	19.272	80.957	1.00	27.11
ATOM	3515	CG	ASP	A	443	17.216	19.413	81.901	1.00	39.99
ATOM	3516	OD1	ASP	A	443	16.063	19.234	81.573	1.00	44.78
ATOM	3517	OD2	ASP	A	443	17.631	19.753	83.094	1.00	56.66
ATOM	3518	N	TRP	A	444	16.525	18.914	77.722	1.00	28.30
ATOM	3519	CA	TRP	A	444	15.614	19.507	76.757	1.00	26.27
ATOM	3520	C	TRP	A	444	14.460	20.296	77.416	1.00	31.52
ATOM	3521	O	TRP	A	444	14.102	21.409	76.988	1.00	34.63
ATOM	3522	CB	TRP	A	444	15.067	18.398	75.799	1.00	21.47
ATOM	3523	CG	TRP	A	444	16.095	17.951	74.806	1.00	22.03
ATOM	3524	CD1	TRP	A	444	16.675	16.718	74.736	1.00	25.16
ATOM	3525	CD2	TRP	A	444	16.733	18.738	73.776	1.00	20.36
ATOM	3526	NE1	TRP	A	444	17.623	16.677	73.738	1.00	23.97
ATOM	3527	CE2	TRP	A	444	17.688	17.906	73.138	1.00	24.71
ATOM	3528	CE3	TRP	A	444	16.596	20.045	73.342	1.00	20.86
ATOM	3529	CZ2	TRP	A	444	18.448	18.345	72.060	1.00	24.51
ATOM	3530	CZ3	TRP	A	444	17.353	20.471	72.264	1.00	22.88
ATOM	3531	CH2	TRP	A	444	18.281	19.643	71.643	1.00	23.48
ATOM	3532	N	ASN	A	445	13.855	19.711	78.457	1.00	24.92
ATOM	3533	CA	ASN	A	445	12.723	20.326	79.113	1.00	26.30
ATOM	3534	C	ASN	A	445	13.040	21.677	79.729	1.00	30.17
ATOM	3535	O	ASN	A	445	12.291	22.660	79.547	1.00	31.86
ATOM	3536	CB	ASN	A	445	11.987	19.382	80.094	1.00	40.83
ATOM	3537	CG	ASN	A	445	10.946	20.033	81.020	1.00	87.07
ATOM	3538	OD1	ASN	A	445	11.271	20.635	82.065	1.00	86.38
ATOM	3539	ND2	ASN	A	445	9.670	19.848	80.688	1.00	71.65
ATOM	3540	N	ALA	A	446	14.147	21.687	80.436	1.00	22.70
ATOM	3541	CA	ALA	A	446	14.583	22.886	81.073	1.00	24.45
ATOM	3542	C	ALA	A	446	14.886	23.896	79.990	1.00	30.52
ATOM	3543	O	ALA	A	446	14.324	25.001	79.936	1.00	33.92
ATOM	3544	CB	ALA	A	446	15.814	22.543	81.900	1.00	25.68
ATOM	3545	N	TRP	A	447	15.776	23.494	79.102	1.00	25.24
ATOM	3546	CA	TRP	A	447	16.162	24.384	78.034	1.00	26.83

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ATOM   3547  C   TRP A 447      14.989  24.912  77.223  1.00 31.32
ATOM   3548  O   TRP A 447      14.971  26.089  76.875  1.00 30.48
ATOM   3549  CB  TRP A 447      17.166  23.725  77.062  1.00 25.78
ATOM   3550  CG  TRP A 447      18.625  23.815  77.421  1.00 26.60
ATOM   3551  CD1 TRP A 447      19.343  22.840  78.046  1.00 28.89
ATOM   3552  CD2 TRP A 447      19.554  24.896  77.165  1.00 26.16
ATOM   3553  NE1 TRP A 447      20.654  23.217  78.197  1.00 27.23
ATOM   3554  CE2 TRP A 447      20.822  24.476  77.660  1.00 29.00
ATOM   3555  CE3 TRP A 447      19.435  26.162  76.607  1.00 27.56
ATOM   3556  CZ2 TRP A 447      21.954  25.290  77.583  1.00 27.95
ATOM   3557  CZ3 TRP A 447      20.554  26.966  76.538  1.00 29.93
ATOM   3558  CH2 TRP A 447      21.792  26.539  77.035  1.00 30.16
ATOM   3559  N   LEU A 448      14.029  24.034  76.893  1.00 26.54
ATOM   3560  CA  LEU A 448      12.896  24.421  76.052  1.00 26.92
ATOM   3561  C   LEU A 448      11.734  25.064  76.779  1.00 36.15
ATOM   3562  O   LEU A 448      11.089  26.031  76.304  1.00 31.19
ATOM   3563  CB  LEU A 448      12.338  23.197  75.307  1.00 25.26
ATOM   3564  CG  LEU A 448      13.311  22.545  74.332  1.00 28.29
ATOM   3565  CD1 LEU A 448      12.597  21.455  73.530  1.00 30.49
ATOM   3566  CD2 LEU A 448      13.879  23.576  73.375  1.00 21.94
ATOM   3567  N   TYR A 449      11.472  24.455  77.924  1.00 33.14
ATOM   3568  CA  TYR A 449      10.373  24.835  78.747  1.00 30.64
ATOM   3569  C   TYR A 449      10.646  25.525  80.041  1.00 34.31
ATOM   3570  O   TYR A 449       9.750  26.191  80.529  1.00 41.98
ATOM   3571  CB  TYR A 449       9.400  23.674  78.916  1.00 29.14
ATOM   3572  CG  TYR A 449       9.212  23.089  77.556  1.00 26.50
ATOM   3573  CD1 TYR A 449       8.762  23.869  76.485  1.00 24.36
ATOM   3574  CD2 TYR A 449       9.560  21.762  77.325  1.00 28.48
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ATOM 3575 CE1 TYR A 449 8.626 23.331 75.202 1.00 17.56
ATOM 3576 CE2 TYR A 449 9.427 21.205 76.054 1.00 29.93
ATOM 3577 CZ TYR A 449 8.959 21.988 74.998 1.00 33.65
ATOM 3578 OH TYR A 449 8.840 21.415 73.762 1.00 39.47
ATOM 3579 N SER A 450 11.806 25.413 80.644 1.00 22.72
ATOM 3580 CA SER A 450 11.902 26.149 81.900 1.00 21.21
ATOM 3581 C SER A 450 12.278 27.625 81.749 1.00 23.98
ATOM 3582 O SER A 450 12.966 28.035 80.810 1.00 27.17
ATOM 3583 CB SER A 450 12.666 25.436 83.010 1.00 24.83
ATOM 3584 OG SER A 450 12.540 24.046 82.871 1.00 36.29
ATOM 3585 N PRO A 451 11.806 28.430 82.689 1.00 19.76
ATOM 3586 CA PRO A 451 12.111 29.840 82.669 1.00 18.20
ATOM 3587 C PRO A 451 13.461 29.988 83.271 1.00 21.72
ATOM 3588 O PRO A 451 14.022 29.015 83.742 1.00 24.34
ATOM 3589 CB PRO A 451 11.185 30.485 83.695 1.00 18.85
ATOM 3590 CG PRO A 451 10.836 29.390 84.677 1.00 23.13
ATOM 3591 CD PRO A 451 11.002 28.078 83.900 1.00 19.61
ATOM 3592 N GLY A 452 13.959 31.212 83.307 1.00 18.97
ATOM 3593 CA GLY A 452 15.241 31.444 83.922 1.00 19.09
ATOM 3594 C GLY A 452 16.382 31.107 83.016 1.00 26.20
ATOM 3595 O GLY A 452 16.191 30.916 81.819 1.00 27.37
ATOM 3596 N LEU A 453 17.557 31.057 83.650 1.00 25.48
ATOM 3597 CA LEU A 453 18.843 30.750 83.029 1.00 25.32
ATOM 3598 C LEU A 453 18.906 29.322 82.629 1.00 26.21
ATOM 3599 O LEU A 453 18.400 28.458 83.322 1.00 25.04
ATOM 3600 CB LEU A 453 20.042 31.119 83.938 1.00 25.46
ATOM 3601 CG LEU A 453 20.280 32.632 83.904 1.00 31.82
ATOM 3602 CD1 LEU A 453 21.019 33.087 85.119 1.00 31.78
ATOM 3603 CD2 LEU A 453 21.046 33.056 82.651 1.00 41.50
ATOM 3604 N PRO A 454 19.510 29.082 81.489 1.00 22.97
ATOM 3605 CA PRO A 454 19.585 27.747 81.003 1.00 21.60
ATOM 3606 C PRO A 454 20.145 26.890 82.075 1.00 26.94
ATOM 3607 O PRO A 454 20.923 27.359 82.893 1.00 29.09
ATOM 3608 CB PRO A 454 20.489 27.780 79.768 1.00 22.34
ATOM 3609 CG PRO A 454 20.777 29.232 79.470 1.00 23.69
ATOM 3610 CD PRO A 454 20.136 30.054 80.556 1.00 20.82
ATOM 3611 N PRO A 455 19.721 25.648 82.067 1.00 25.61
ATOM 3612 CA PRO A 455 20.167 24.683 83.031 1.00 24.27
ATOM 3613 C PRO A 455 21.661 24.568 82.991 1.00 30.95
ATOM 3614 O PRO A 455 22.225 24.062 83.920 1.00 33.47
ATOM 3615 CB PRO A 455 19.631 23.320 82.592 1.00 25.04
ATOM 3616 CG PRO A 455 19.149 23.497 81.162 1.00 33.02
ATOM 3617 CD PRO A 455 19.111 25.005 80.888 1.00 28.49
ATOM 3618 N ILE A 456 22.305 25.002 81.911 1.00 27.91
ATOM 3619 CA ILE A 456 23.764 24.893 81.821 1.00 27.82
ATOM 3620 C ILE A 456 24.395 26.057 81.077 1.00 34.73
ATOM 3621 O ILE A 456 23.737 26.769 80.293 1.00 37.01
ATOM 3622 CB ILE A 456 24.228 23.540 81.259 1.00 31.34
ATOM 3623 CG1 ILE A 456 25.721 23.305 81.417 1.00 29.78
ATOM 3624 CG2 ILE A 456 23.865 23.369 79.788 1.00 32.96
ATOM 3625 CD1 ILE A 456 26.054 21.852 81.116 1.00 23.94
ATOM 3626 N LYS A 457 25.680 26.252 81.334 1.00 30.52
ATOM 3627 CA LYS A 457 26.405 27.335 80.707 1.00 30.21
ATOM 3628 C LYS A 457 27.515 26.808 79.835 1.00 32.14
ATOM 3629 O LYS A 457 28.328 26.037 80.273 1.00 33.07
ATOM 3630 CB LYS A 457 26.953 28.264 81.749 1.00 32.38
ATOM 3631 CG LYS A 457 27.818 29.327 81.121 1.00 34.64
ATOM 3632 CD LYS A 457 28.288 30.306 82.166 1.00 13.41

ATOM 3633 CE LYS A 457 28.803 31.596 81.565 1.00 18.04
ATOM 3634 NZ LYS A 457 28.974 32.643 82.595 1.00 26.77
ATOM 3635 N PRO A 458 27.567 27.208 78.589 1.00 27.50
ATOM 3636 CA PRO A 458 28.630 26.675 77.737 1.00 26.85
ATOM 3637 C PRO A 458 29.994 27.147 78.185 1.00 26.89
ATOM 3638 O PRO A 458 30.128 27.876 79.167 1.00 24.86
ATOM 3639 CB PRO A 458 28.335 27.191 76.316 1.00 29.41
ATOM 3640 CG PRO A 458 26.952 27.864 76.375 1.00 33.24
ATOM 3641 CD PRO A 458 26.574 28.044 77.848 1.00 26.12
ATOM 3642 N ASN A 459 31.005 26.754 77.440 1.00 22.13
ATOM 3643 CA ASN A 459 32.359 27.191 77.735 1.00 22.29
ATOM 3644 C ASN A 459 32.751 28.325 76.820 1.00 30.27
ATOM 3645 O ASN A 459 32.451 28.296 75.617 1.00 32.89
ATOM 3646 CB ASN A 459 33.315 26.060 77.494 1.00 25.03
ATOM 3647 CG ASN A 459 32.766 24.846 78.155 1.00 49.54
ATOM 3648 OD1 ASN A 459 32.618 24.822 79.383 1.00 50.09
ATOM 3649 ND2 ASN A 459 32.411 23.870 77.332 1.00 38.39
ATOM 3650 N TYR A 460 33.448 29.316 77.380 1.00 25.58
ATOM 3651 CA TYR A 460 33.851 30.493 76.625 1.00 23.89
ATOM 3652 C TYR A 460 35.298 30.853 76.745 1.00 34.20
ATOM 3653 O TYR A 460 35.849 30.862 77.839 1.00 35.27
ATOM 3654 CB TYR A 460 33.120 31.708 77.171 1.00 24.38
ATOM 3655 CG TYR A 460 31.636 31.631 77.024 1.00 26.98
ATOM 3656 CD1 TYR A 460 31.029 32.011 75.829 1.00 30.69
ATOM 3657 CD2 TYR A 460 30.838 31.168 78.064 1.00 25.70
ATOM 3658 CE1 TYR A 460 29.644 31.952 75.684 1.00 28.77
ATOM 3659 CE2 TYR A 460 29.453 31.096 77.938 1.00 25.24
ATOM 3660 CZ TYR A 460 28.863 31.496 76.741 1.00 24.49
ATOM 3661 OH TYR A 460 27.519 31.443 76.587 1.00 28.39
ATOM 3662 N ASP A 461 35.893 31.227 75.616 1.00 30.58
ATOM 3663 CA ASP A 461 37.268 31.640 75.654 1.00 27.51
ATOM 3664 C ASP A 461 37.319 32.941 76.464 1.00 23.53
ATOM 3665 O ASP A 461 36.377 33.704 76.396 1.00 26.62
ATOM 3666 CB ASP A 461 37.821 31.784 74.218 1.00 27.30
ATOM 3667 CG ASP A 461 39.137 32.466 74.260 1.00 32.53
ATOM 3668 OD1 ASP A 461 39.262 33.672 74.334 1.00 39.66
ATOM 3669 OD2 ASP A 461 40.130 31.628 74.306 1.00 44.34
ATOM 3670 N MET A 462 38.375 33.234 77.224 1.00 17.26
ATOM 3671 CA MET A 462 38.396 34.511 78.008 1.00 18.66
ATOM 3672 C MET A 462 39.299 35.634 77.485 1.00 24.02
ATOM 3673 O MET A 462 39.336 36.738 78.011 1.00 24.56
ATOM 3674 CB MET A 462 38.818 34.186 79.431 1.00 22.99
ATOM 3675 CG MET A 462 37.808 33.209 80.025 1.00 28.98
ATOM 3676 SD MET A 462 36.166 33.969 79.951 1.00 33.22
ATOM 3677 CE MET A 462 36.420 35.300 81.153 1.00 27.89
ATOM 3678 N THR A 463 40.067 35.348 76.461 1.00 22.57
ATOM 3679 CA THR A 463 41.015 36.285 75.911 1.00 22.64
ATOM 3680 C THR A 463 40.690 37.738 75.961 1.00 33.12
ATOM 3681 O THR A 463 41.372 38.493 76.640 1.00 35.27
ATOM 3682 CB THR A 463 41.574 35.929 74.536 1.00 29.80
ATOM 3683 OG1 THR A 463 41.939 34.576 74.509 1.00 26.74
ATOM 3684 CG2 THR A 463 42.797 36.793 74.224 1.00 18.79
ATOM 3685 N LEU A 464 39.700 38.141 75.177 1.00 30.50
ATOM 3686 CA LEU A 464 39.293 39.533 75.061 1.00 29.15
ATOM 3687 C LEU A 464 38.490 40.067 76.216 1.00 34.24
ATOM 3688 O LEU A 464 38.439 41.270 76.422 1.00 37.12
ATOM 3689 CB LEU A 464 38.537 39.767 73.743 1.00 29.20
ATOM 3690 CG LEU A 464 39.393 39.394 72.527 1.00 33.73

ATOM 3691 CD1 LEU A 464 38.609 39.565 71.217 1.00 32.72
ATOM 3692 CD2 LEU A 464 40.648 40.261 72.499 1.00 26.22
ATOM 3693 N THR A 465 37.855 39.167 76.964 1.00 30.71
ATOM 3694 CA THR A 465 37.005 39.496 78.103 1.00 28.58
ATOM 3695 C THR A 465 37.800 39.893 79.324 1.00 30.69
ATOM 3696 O THR A 465 37.530 40.865 80.030 1.00 31.27
ATOM 3697 CB THR A 465 36.016 38.328 78.372 1.00 35.85
ATOM 3698 OG1 THR A 465 35.101 38.212 77.296 1.00 50.93
ATOM 3699 CG2 THR A 465 35.255 38.451 79.690 1.00 26.34
ATOM 3700 N ASN A 466 38.802 39.111 79.568 1.00 24.40
ATOM 3701 CA ASN A 466 39.635 39.375 80.688 1.00 23.11
ATOM 3702 C ASN A 466 39.899 40.856 80.967 1.00 28.37
ATOM 3703 O ASN A 466 39.763 41.270 82.120 1.00 27.03
ATOM 3704 CB ASN A 466 40.921 38.543 80.629 1.00 20.30
ATOM 3705 CG ASN A 466 40.709 37.145 81.155 1.00 32.26
ATOM 3706 OD1 ASN A 466 41.384 36.191 80.723 1.00 29.29
ATOM 3707 ND2 ASN A 466 39.775 37.015 82.111 1.00 28.19
ATOM 3708 N ALA A 467 40.306 41.666 79.967 1.00 27.97
ATOM 3709 CA ALA A 467 40.587 43.079 80.295 1.00 26.66
ATOM 3710 C ALA A 467 39.352 43.827 80.720 1.00 31.78
ATOM 3711 O ALA A 467 39.406 44.845 81.393 1.00 31.71
ATOM 3712 CB ALA A 467 41.365 43.837 79.256 1.00 25.99
ATOM 3713 N CYS A 468 38.217 43.277 80.336 1.00 28.06
ATOM 3714 CA CYS A 468 36.942 43.862 80.693 1.00 25.80
ATOM 3715 C CYS A 468 36.668 43.619 82.165 1.00 26.47
ATOM 3716 O CYS A 468 36.469 44.517 82.963 1.00 27.99
ATOM 3717 CB CYS A 468 35.882 43.376 79.696 1.00 24.56
ATOM 3718 SG CYS A 468 36.455 43.873 78.049 1.00 27.76
ATOM 3719 N ILE A 469 36.752 42.384 82.540 1.00 24.34
ATOM 3720 CA ILE A 469 36.599 42.052 83.921 1.00 25.23
ATOM 3721 C ILE A 469 37.560 42.800 84.876 1.00 28.13
ATOM 3722 O ILE A 469 37.175 43.220 85.950 1.00 29.54
ATOM 3723 CB ILE A 469 36.858 40.574 84.068 1.00 27.23
ATOM 3724 CG1 ILE A 469 35.956 39.801 83.112 1.00 26.94
ATOM 3725 CG2 ILE A 469 36.537 40.208 85.496 1.00 25.56
ATOM 3726 CD1 ILE A 469 36.247 38.298 83.085 1.00 45.50
ATOM 3727 N ALA A 470 38.830 42.960 84.534 1.00 23.28
ATOM 3728 CA ALA A 470 39.749 43.621 85.461 1.00 22.23
ATOM 3729 C ALA A 470 39.392 45.038 85.808 1.00 30.29
ATOM 3730 O ALA A 470 39.474 45.451 86.986 1.00 32.82
ATOM 3731 CB ALA A 470 41.218 43.502 85.074 1.00 21.98
ATOM 3732 N LEU A 471 39.007 45.760 84.759 1.00 23.53
ATOM 3733 CA LEU A 471 38.643 47.173 84.834 1.00 18.39
ATOM 3734 C LEU A 471 37.333 47.373 85.569 1.00 26.57
ATOM 3735 O LEU A 471 37.210 48.208 86.462 1.00 30.48
ATOM 3736 CB LEU A 471 38.676 47.827 83.444 1.00 15.51
ATOM 3737 CG LEU A 471 38.671 49.325 83.539 1.00 24.20
ATOM 3738 CD1 LEU A 471 39.754 49.795 84.513 1.00 24.86
ATOM 3739 CD2 LEU A 471 38.876 49.941 82.156 1.00 26.35
ATOM 3740 N SER A 472 36.351 46.570 85.222 1.00 25.31
ATOM 3741 CA SER A 472 35.080 46.674 85.901 1.00 27.56
ATOM 3742 C SER A 472 35.260 46.477 87.396 1.00 33.46
ATOM 3743 O SER A 472 34.800 47.292 88.214 1.00 32.85
ATOM 3744 CB SER A 472 33.989 45.714 85.393 1.00 32.06
ATOM 3745 OG SER A 472 34.492 44.774 84.470 1.00 48.56
ATOM 3746 N GLN A 473 35.911 45.350 87.736 1.00 27.52
ATOM 3747 CA GLN A 473 36.170 44.971 89.108 1.00 24.10
ATOM 3748 C GLN A 473 36.866 46.096 89.836 1.00 25.18

Substitute Sheet (Rule 26)

ATOM	3749	O	GLN	A	473	36.534	46.458	90.969	1.00 21.62
ATOM	3750	CB	GLN	A	473	36.994	43.671	89.148	1.00 25.86
ATOM	3751	CG	GLN	A	473	36.128	42.402	89.118	1.00 32.72
ATOM	3752	CD	GLN	A	473	34.970	42.504	90.090	1.00 46.08
ATOM	3753	OE1	GLN	A	473	35.165	42.422	91.308	1.00 40.73
ATOM	3754	NE2	GLN	A	473	33.761	42.692	89.559	1.00 28.28
ATOM	3755	N	ARG	A	474	37.855	46.656	89.161	1.00 24.00
ATOM	3756	CA	ARG	A	474	38.562	47.765	89.779	1.00 24.46
ATOM	3757	C	ARG	A	474	37.609	48.893	90.141	1.00 29.31
ATOM	3758	O	ARG	A	474	37.620	49.447	91.242	1.00 33.13
ATOM	3759	CB	ARG	A	474	39.682	48.290	88.898	1.00 20.19
ATOM	3760	CG	ARG	A	474	40.866	47.352	88.831	1.00 28.48
ATOM	3761	CD	ARG	A	474	41.871	47.869	87.832	1.00 34.41
ATOM	3762	NE	ARG	A	474	42.258	49.245	88.093	1.00 40.09
ATOM	3763	CZ	ARG	A	474	42.927	49.938	87.185	1.00 51.25
ATOM	3764	NH1	ARG	A	474	43.220	49.376	86.019	1.00 24.79
ATOM	3765	NH2	ARG	A	474	43.316	51.199	87.444	1.00 20.43
ATOM	3766	N	TRP	A	475	36.791	49.259	89.178	1.00 25.32
ATOM	3767	CA	TRP	A	475	35.862	50.332	89.400	1.00 26.77
ATOM	3768	C	TRP	A	475	34.881	49.962	90.474	1.00 27.52
ATOM	3769	O	TRP	A	475	34.749	50.633	91.475	1.00 29.64
ATOM	3770	CB	TRP	A	475	35.199	50.804	88.093	1.00 27.95
ATOM	3771	CG	TRP	A	475	36.047	51.819	87.361	1.00 32.11
ATOM	3772	CD1	TRP	A	475	36.873	51.592	86.298	1.00 35.65
ATOM	3773	CD2	TRP	A	475	36.161	53.217	87.648	1.00 31.62
ATOM	3774	NE1	TRP	A	475	37.484	52.748	85.904	1.00 34.92
ATOM	3775	CE2	TRP	A	475	37.054	53.763	86.707	1.00 36.16
ATOM	3776	CE3	TRP	A	475	35.588	54.040	88.606	1.00 32.63
ATOM	3777	CZ2	TRP	A	475	37.372	55.112	86.719	1.00 36.24
ATOM	3778	CZ3	TRP	A	475	35.897	55.375	88.616	1.00 34.74
ATOM	3779	CH2	TRP	A	475	36.777	55.901	87.685	1.00 35.77
ATOM	3780	N	ILE	A	476	34.234	48.847	90.279	1.00 26.36
ATOM	3781	CA	ILE	A	476	33.268	48.386	91.235	1.00 28.33
ATOM	3782	C	ILE	A	476	33.771	48.315	92.681	1.00 34.20
ATOM	3783	O	ILE	A	476	33.056	48.595	93.637	1.00 36.89
ATOM	3784	CB	ILE	A	476	32.722	47.070	90.761	1.00 32.23
ATOM	3785	CG1	ILE	A	476	31.993	47.308	89.443	1.00 30.49
ATOM	3786	CG2	ILE	A	476	31.864	46.376	91.851	1.00 34.86
ATOM	3787	CD1	ILE	A	476	31.595	46.005	88.756	1.00 33.04
ATOM	3788	N	THR	A	477	35.010	47.934	92.860	1.00 27.27
ATOM	3789	CA	THR	A	477	35.558	47.846	94.194	1.00 24.15
ATOM	3790	C	THR	A	477	36.416	49.052	94.523	1.00 27.30
ATOM	3791	O	THR	A	477	37.120	49.065	95.519	1.00 27.36
ATOM	3792	CB	THR	A	477	36.402	46.578	94.257	1.00 32.13
ATOM	3793	OG1	THR	A	477	37.593	46.848	93.557	1.00 29.48
ATOM	3794	CG2	THR	A	477	35.634	45.470	93.530	1.00 16.94
ATOM	3795	N	ALA	A	478	36.371	50.097	93.695	1.00 22.33
ATOM	3796	CA	ALA	A	478	37.164	51.260	93.988	1.00 20.44
ATOM	3797	C	ALA	A	478	36.890	51.843	95.390	1.00 32.94
ATOM	3798	O	ALA	A	478	35.786	51.756	95.922	1.00 34.38
ATOM	3799	CB	ALA	A	478	36.938	52.343	92.942	1.00 19.26
ATOM	3800	N	LYS	A	479	37.931	52.469	95.970	1.00 29.65
ATOM	3801	CA	LYS	A	479	37.899	53.168	97.243	1.00 27.30
ATOM	3802	C	LYS	A	479	38.575	54.512	97.051	1.00 36.54
ATOM	3803	O	LYS	A	479	39.378	54.692	96.118	1.00 34.13
ATOM	3804	CB	LYS	A	479	38.457	52.410	98.417	1.00 28.01
ATOM	3805	CG	LYS	A	479	37.696	51.116	98.631	1.00 51.38
ATOM	3806	CD	LYS	A	479	37.115	50.880	100.021	1.00 67.24

ATOM 3807 CE LYS A 479 35.804 50.103 99.931 1.00 87.12
ATOM 3808 NZ LYS A 479 35.711 48.948 100.841 1.00 85.55
ATOM 3809 N GLU A 480 38.241 55.477 97.900 1.00 36.30
ATOM 3810 CA GLU A 480 38.843 56.793 97.751 1.00 34.79
ATOM 3811 C GLU A 480 40.261 56.707 97.220 1.00 34.79
ATOM 3812 O GLU A 480 40.613 57.332 96.234 1.00 34.10
ATOM 3813 CB GLU A 480 38.899 57.565 99.078 1.00 36.21
ATOM 3814 CG GLU A 480 37.709 58.500 99.303 1.00 63.85
ATOM 3815 CD GLU A 480 37.601 59.511 98.214 1.00100.00
ATOM 3816 OE1 GLU A 480 38.457 59.648 97.357 1.00100.00
ATOM 3817 OE2 GLU A 480 36.491 60.209 98.288 1.00100.00
ATOM 3818 N ASP A 481 41.080 55.946 97.904 1.00 24.69
ATOM 3819 CA ASP A 481 42.451 55.860 97.519 1.00 23.87
ATOM 3820 C ASP A 481 42.771 55.314 96.132 1.00 34.51
ATOM 3821 O ASP A 481 43.925 55.312 95.721 1.00 39.44
ATOM 3822 CB ASP A 481 43.262 55.155 98.611 1.00 25.29
ATOM 3823 CG ASP A 481 43.072 53.668 98.575 1.00 39.58
ATOM 3824 OD1 ASP A 481 42.471 53.029 97.708 1.00 46.00
ATOM 3825 OD2 ASP A 481 43.698 53.107 99.567 1.00 39.59
ATOM 3826 N ASP A 482 41.788 54.881 95.373 1.00 30.70
ATOM 3827 CA ASP A 482 42.098 54.379 94.024 1.00 31.73
ATOM 3828 C ASP A 482 41.725 55.307 92.859 1.00 34.17
ATOM 3829 O ASP A 482 42.158 55.150 91.717 1.00 35.45
ATOM 3830 CB ASP A 482 41.399 53.022 93.756 1.00 33.31
ATOM 3831 CG ASP A 482 41.686 51.970 94.779 1.00 38.90
ATOM 3832 OD1 ASP A 482 42.810 51.514 94.992 1.00 42.45
ATOM 3833 OD2 ASP A 482 40.606 51.625 95.440 1.00 40.17
ATOM 3834 N LEU A 483 40.863 56.246 93.146 1.00 29.93
ATOM 3835 CA LEU A 483 40.352 57.159 92.160 1.00 27.80
ATOM 3836 C LEU A 483 41.434 57.943 91.410 1.00 40.70
ATOM 3837 O LEU A 483 41.386 58.102 90.180 1.00 40.76
ATOM 3838 CB LEU A 483 39.265 58.049 92.819 1.00 22.54
ATOM 3839 CG LEU A 483 38.148 57.240 93.488 1.00 20.75
ATOM 3840 CD1 LEU A 483 37.170 58.165 94.197 1.00 19.29
ATOM 3841 CD2 LEU A 483 37.389 56.467 92.414 1.00 21.46
ATOM 3842 N ASN A 484 42.410 58.446 92.162 1.00 36.15
ATOM 3843 CA ASN A 484 43.459 59.225 91.571 1.00 34.08
ATOM 3844 C ASN A 484 44.168 58.524 90.429 1.00 39.51
ATOM 3845 O ASN A 484 44.456 59.091 89.359 1.00 38.59
ATOM 3846 CB ASN A 484 44.495 59.602 92.618 1.00 34.26
ATOM 3847 CG ASN A 484 45.807 59.955 91.941 1.00100.00
ATOM 3848 OD1 ASN A 484 45.878 60.940 91.171 1.00100.00
ATOM 3849 ND2 ASN A 484 46.836 59.134 92.186 1.00100.00
ATOM 3850 N SER A 485 44.472 57.268 90.698 1.00 35.37
ATOM 3851 CA SER A 485 45.202 56.417 89.791 1.00 32.79
ATOM 3852 C SER A 485 44.522 56.140 88.484 1.00 32.26
ATOM 3853 O SER A 485 45.159 55.925 87.463 1.00 32.44
ATOM 3854 CB SER A 485 45.565 55.132 90.477 1.00 38.65
ATOM 3855 OG SER A 485 46.040 55.437 91.777 1.00 62.66
ATOM 3856 N PHE A 486 43.222 56.110 88.491 1.00 27.13
ATOM 3857 CA PHE A 486 42.631 55.809 87.233 1.00 28.26
ATOM 3858 C PHE A 486 43.193 56.772 86.264 1.00 32.12
ATOM 3859 O PHE A 486 43.423 57.910 86.604 1.00 32.02
ATOM 3860 CB PHE A 486 41.101 55.819 87.198 1.00 31.01
ATOM 3861 CG PHE A 486 40.471 54.807 88.132 1.00 27.04
ATOM 3862 CD1 PHE A 486 40.504 53.425 87.911 1.00 22.43
ATOM 3863 CD2 PHE A 486 39.805 55.293 89.253 1.00 21.40
ATOM 3864 CE1 PHE A 486 39.896 52.538 88.804 1.00 19.69

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ATOM   3865  CE2 PHE A 486      39.224  54.426  90.174  1.00 19.20
ATOM   3866  CZ  PHE A 486      39.245  53.051  89.927  1.00 15.13
ATOM   3867  N   ASN A 487      43.455  56.279  85.089  1.00 34.97
ATOM   3868  CA  ASN A 487      44.032  57.092  84.070  1.00 38.06
ATOM   3869  C   ASN A 487      43.491  56.622  82.758  1.00 43.55
ATOM   3870  O   ASN A 487      42.951  55.537  82.604  1.00 46.30
ATOM   3871  CB  ASN A 487      45.591  57.038  84.085  1.00 43.93
ATOM   3872  CG  ASN A 487      46.196  58.169  83.302  1.00 56.10
ATOM   3873  OD1 ASN A 487      46.057  58.189  82.077  1.00 42.12
ATOM   3874  ND2 ASN A 487      46.829  59.112  84.007  1.00 65.62
ATOM   3875  N   ALA A 488      43.662  57.435  81.781  1.00 39.34
ATOM   3876  CA  ALA A 488      43.201  57.055  80.472  1.00 38.25
ATOM   3877  C   ALA A 488      44.024  55.900  79.809  1.00 43.58
ATOM   3878  O   ALA A 488      43.596  55.317  78.834  1.00 44.11
ATOM   3879  CB  ALA A 488      43.153  58.314  79.621  1.00 37.54
ATOM   3880  N   THR A 489      45.207  55.555  80.314  1.00 38.34
ATOM   3881  CA  THR A 489      45.996  54.499  79.715  1.00 36.16
ATOM   3882  C   THR A 489      45.270  53.181  79.792  1.00 45.74
ATOM   3883  O   THR A 489      45.476  52.233  79.057  1.00 47.78
ATOM   3884  CB  THR A 489      47.296  54.458  80.503  1.00 31.01
ATOM   3885  OG1 THR A 489      46.961  54.457  81.872  1.00 35.33
ATOM   3886  CG2 THR A 489      47.993  55.771  80.229  1.00 28.28
ATOM   3887  N   ASP A 490      44.337  53.182  80.708  1.00 46.75
ATOM   3888  CA  ASP A 490      43.560  52.018  80.972  1.00 51.49
ATOM   3889  C   ASP A 490      42.759  51.515  79.786  1.00 52.21
ATOM   3890  O   ASP A 490      42.396  50.342  79.651  1.00 54.75
ATOM   3891  CB  ASP A 490      42.676  52.345  82.184  1.00 54.04
ATOM   3892  CG  ASP A 490      43.413  52.884  83.380  1.00 53.83
ATOM   3893  OD1 ASP A 490      44.621  52.777  83.616  1.00 62.93
ATOM   3894  OD2 ASP A 490      42.565  53.446  84.165  1.00 35.66
ATOM   3895  N   LEU A 491      42.486  52.450  78.938  1.00 42.42
ATOM   3896  CA  LEU A 491      41.752  52.250  77.723  1.00 43.54
ATOM   3897  C   LEU A 491      42.712  51.977  76.585  1.00 43.97
ATOM   3898  O   LEU A 491      42.340  51.438  75.588  1.00 42.53
ATOM   3899  CB  LEU A 491      40.984  53.528  77.421  1.00 44.89
ATOM   3900  CG  LEU A 491      39.794  53.747  78.338  1.00 48.31
ATOM   3901  CD1 LEU A 491      38.558  54.171  77.552  1.00 49.16
ATOM   3902  CD2 LEU A 491      39.377  52.494  79.125  1.00 39.24
ATOM   3903  N   LYS A 492      43.958  52.403  76.754  1.00 42.32
ATOM   3904  CA  LYS A 492      44.999  52.320  75.696  1.00 44.57
ATOM   3905  C   LYS A 492      44.826  51.165  74.680  1.00 49.08
ATOM   3906  O   LYS A 492      44.810  51.343  73.473  1.00 49.66
ATOM   3907  CB  LYS A 492      46.359  52.177  76.401  1.00 48.47
ATOM   3908  CG  LYS A 492      47.487  52.883  75.629  1.00 88.73
ATOM   3909  CD  LYS A 492      48.852  52.537  76.197  1.00100.00
ATOM   3910  CE  LYS A 492      48.786  51.460  77.300  1.00100.00
ATOM   3911  NZ  LYS A 492      50.103  50.896  77.541  1.00100.00
ATOM   3912  N   ASP A 493      44.711  49.917  75.227  1.00 41.86
ATOM   3913  CA  ASP A 493      44.664  48.740  74.372  1.00 40.17
ATOM   3914  C   ASP A 493      43.220  48.162  74.215  1.00 44.29
ATOM   3915  O   ASP A 493      43.031  46.973  73.889  1.00 42.00
ATOM   3916  CB  ASP A 493      45.560  47.699  75.015  1.00 41.52
ATOM   3917  CG  ASP A 493      47.021  48.130  74.956  1.00 67.01
ATOM   3918  OD1 ASP A 493      47.467  48.451  73.856  1.00 77.10
ATOM   3919  OD2 ASP A 493      47.678  48.131  75.984  1.00 57.19
ATOM   3920  N   LEU A 494      42.193  49.005  74.475  1.00 40.69
ATOM   3921  CA  LEU A 494      40.789  48.512  74.526  1.00 36.32
ATOM   3922  C   LEU A 494      39.992  48.877  73.245  1.00 37.76
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ATOM   3923  O   LEU A 494      39.897  50.029  72.863  1.00 38.93
ATOM   3924  CB  LEU A 494      40.098  49.125  75.733  1.00 32.52
ATOM   3925  CG  LEU A 494      40.376  48.433  77.063  1.00 30.66
ATOM   3926  CD1 LEU A 494      39.229  48.580  78.052  1.00 30.39
ATOM   3927  CD2 LEU A 494      40.611  46.925  76.918  1.00 23.54
ATOM   3928  N   SER A 495      39.477  47.825  72.631  1.00 25.56
ATOM   3929  CA  SER A 495      38.674  48.017  71.457  1.00 22.23
ATOM   3930  C   SER A 495      37.344  48.670  71.856  1.00 31.27
ATOM   3931  O   SER A 495      36.968  48.706  73.038  1.00 31.21
ATOM   3932  CB  SER A 495      38.380  46.705  70.795  1.00 20.88
ATOM   3933  OG  SER A 495      37.192  46.143  71.317  1.00 33.60
ATOM   3934  N   SER A 496      36.627  49.184  70.865  1.00 29.48
ATOM   3935  CA  SER A 496      35.363  49.821  71.139  1.00 26.67
ATOM   3936  C   SER A 496      34.495  48.747  71.744  1.00 29.54
ATOM   3937  O   SER A 496      33.744  48.960  72.697  1.00 24.80
ATOM   3938  CB  SER A 496      34.760  50.441  69.894  1.00 24.67
ATOM   3939  OG  SER A 496      33.749  49.597  69.397  1.00 48.80
ATOM   3940  N   HIS A 497      34.674  47.547  71.219  1.00 26.61
ATOM   3941  CA  HIS A 497      33.949  46.383  71.750  1.00 29.22
ATOM   3942  C   HIS A 497      34.156  46.148  73.275  1.00 37.24
ATOM   3943  O   HIS A 497      33.238  45.863  74.041  1.00 38.21
ATOM   3944  CB  HIS A 497      34.364  45.106  70.978  1.00 30.69
ATOM   3945  CG  HIS A 497      34.182  45.348  69.545  1.00 34.29
ATOM   3946  ND1 HIS A 497      32.943  45.204  68.962  1.00 35.42
ATOM   3947  CD2 HIS A 497      35.054  45.833  68.622  1.00 36.68
ATOM   3948  CE1 HIS A 497      33.075  45.531  67.702  1.00 35.05
ATOM   3949  NE2 HIS A 497      34.330  45.932  67.462  1.00 35.88
ATOM   3950  N   GLN A 498      35.406  46.243  73.715  1.00 33.56
ATOM   3951  CA  GLN A 498      35.737  46.008  75.094  1.00 29.69
ATOM   3952  C   GLN A 498      35.263  47.122  75.965  1.00 27.11
ATOM   3953  O   GLN A 498      34.842  46.930  77.089  1.00 23.92
ATOM   3954  CB  GLN A 498      37.221  45.659  75.248  1.00 29.95
ATOM   3955  CG  GLN A 498      37.582  44.317  74.544  1.00 25.78
ATOM   3956  CD  GLN A 498      39.074  44.084  74.535  1.00 28.64
ATOM   3957  OE1 GLN A 498      39.796  44.891  73.960  1.00 26.62
ATOM   3958  NE2 GLN A 498      39.561  43.049  75.218  1.00 20.96
ATOM   3959  N   LEU A 499      35.289  48.301  75.431  1.00 27.13
ATOM   3960  CA  LEU A 499      34.819  49.396  76.229  1.00 29.32
ATOM   3961  C   LEU A 499      33.351  49.162  76.632  1.00 28.39
ATOM   3962  O   LEU A 499      32.893  49.361  77.780  1.00 29.41
ATOM   3963  CB  LEU A 499      34.991  50.709  75.436  1.00 31.70
ATOM   3964  CG  LEU A 499      36.242  51.512  75.788  1.00 39.76
ATOM   3965  CD1 LEU A 499      37.335  50.572  76.278  1.00 42.91
ATOM   3966  CD2 LEU A 499      36.718  52.268  74.555  1.00 39.08
ATOM   3967  N   ASN A 500      32.606  48.737  75.642  1.00 15.23
ATOM   3968  CA  ASN A 500      31.213  48.508  75.828  1.00 13.44
ATOM   3969  C   ASN A 500      30.919  47.455  76.864  1.00 18.98
ATOM   3970  O   ASN A 500      29.997  47.602  77.705  1.00 19.01
ATOM   3971  CB  ASN A 500      30.604  48.129  74.476  1.00 12.21
ATOM   3972  CG  ASN A 500      29.093  48.214  74.426  1.00 37.49
ATOM   3973  OD1 ASN A 500      28.433  49.151  74.930  1.00 36.17
ATOM   3974  ND2 ASN A 500      28.542  47.218  73.787  1.00 18.34
ATOM   3975  N   GLU A 501      31.699  46.366  76.743  1.00 14.20
ATOM   3976  CA  GLU A 501      31.626  45.224  77.625  1.00 13.27
ATOM   3977  C   GLU A 501      31.948  45.676  79.063  1.00 21.59
ATOM   3978  O   GLU A 501      31.175  45.463  80.009  1.00 25.02
ATOM   3979  CB  GLU A 501      32.446  44.057  77.053  1.00 14.95
ATOM   3980  CG  GLU A 501      32.371  42.827  77.989  1.00 30.40
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ATOM 3981 CD GLU A 501 30.946 42.399 78.199 1.00 39.28
ATOM 3982 OE1 GLU A 501 30.050 42.672 77.413 1.00 76.70
ATOM 3983 OE2 GLU A 501 30.780 41.694 79.292 1.00 46.10
ATOM 3984 N PHE A 502 33.059 46.400 79.226 1.00 18.07
ATOM 3985 CA PHE A 502 33.395 46.952 80.530 1.00 21.54
ATOM 3986 C PHE A 502 32.179 47.679 81.125 1.00 23.38
ATOM 3987 O PHE A 502 31.786 47.491 82.301 1.00 21.47
ATOM 3988 CB PHE A 502 34.507 48.012 80.327 1.00 26.05
ATOM 3989 CG PHE A 502 34.590 49.082 81.393 1.00 30.41
ATOM 3990 CD1 PHE A 502 35.085 48.781 82.662 1.00 29.68
ATOM 3991 CD2 PHE A 502 34.211 50.402 81.132 1.00 39.16
ATOM 3992 CE1 PHE A 502 35.183 49.773 83.638 1.00 31.12
ATOM 3993 CE2 PHE A 502 34.305 51.414 82.096 1.00 40.46
ATOM 3994 CZ PHE A 502 34.812 51.090 83.352 1.00 35.41
ATOM 3995 N LEU A 503 31.613 48.557 80.288 1.00 18.39
ATOM 3996 CA LEU A 503 30.487 49.343 80.692 1.00 22.78
ATOM 3997 C LEU A 503 29.337 48.491 81.178 1.00 31.04
ATOM 3998 O LEU A 503 28.768 48.784 82.243 1.00 29.23
ATOM 3999 CB LEU A 503 30.002 50.325 79.619 1.00 24.68
ATOM 4000 CG LEU A 503 30.888 51.571 79.465 1.00 27.47
ATOM 4001 CD1 LEU A 503 30.415 52.376 78.259 1.00 24.86
ATOM 4002 CD2 LEU A 503 30.860 52.420 80.733 1.00 20.54
ATOM 4003 N ALA A 504 29.012 47.444 80.378 1.00 27.79
ATOM 4004 CA ALA A 504 27.911 46.474 80.643 1.00 24.63
ATOM 4005 C ALA A 504 28.140 45.752 81.939 1.00 27.71
ATOM 4006 O ALA A 504 27.265 45.577 82.817 1.00 28.62
ATOM 4007 CB ALA A 504 27.762 45.482 79.496 1.00 23.87
ATOM 4008 N GLN A 505 29.382 45.344 82.066 1.00 22.16
ATOM 4009 CA GLN A 505 29.738 44.710 83.299 1.00 21.02
ATOM 4010 C GLN A 505 29.489 45.737 84.423 1.00 31.26
ATOM 4011 O GLN A 505 28.787 45.507 85.413 1.00 32.31
ATOM 4012 CB GLN A 505 31.202 44.209 83.270 1.00 18.95
ATOM 4013 CG GLN A 505 31.367 42.881 82.495 1.00 13.72
ATOM 4014 CD GLN A 505 32.806 42.549 82.136 1.00 31.75
ATOM 4015 OE1 GLN A 505 33.796 42.969 82.768 1.00 43.14
ATOM 4016 NE2 GLN A 505 32.923 41.781 81.085 1.00 39.34
ATOM 4017 N THR A 506 30.056 46.918 84.263 1.00 25.95
ATOM 4018 CA THR A 506 29.855 47.864 85.302 1.00 23.64
ATOM 4019 C THR A 506 28.411 48.101 85.579 1.00 23.89
ATOM 4020 O THR A 506 27.923 47.999 86.696 1.00 22.75
ATOM 4021 CB THR A 506 30.600 49.130 85.008 1.00 23.72
ATOM 4022 OG1 THR A 506 31.938 48.749 84.742 1.00 27.18
ATOM 4023 CG2 THR A 506 30.502 49.961 86.260 1.00 11.12
ATOM 4024 N LEU A 507 27.727 48.408 84.518 1.00 17.92
ATOM 4025 CA LEU A 507 26.334 48.683 84.604 1.00 17.22
ATOM 4026 C LEU A 507 25.618 47.683 85.442 1.00 25.65
ATOM 4027 O LEU A 507 24.816 48.073 86.266 1.00 27.85
ATOM 4028 CB LEU A 507 25.693 48.686 83.224 1.00 17.85
ATOM 4029 CG LEU A 507 24.207 48.930 83.336 1.00 21.02
ATOM 4030 CD1 LEU A 507 23.974 50.290 83.970 1.00 22.48
ATOM 4031 CD2 LEU A 507 23.599 48.919 81.949 1.00 15.25
ATOM 4032 N GLN A 508 25.878 46.395 85.194 1.00 21.35
ATOM 4033 CA GLN A 508 25.215 45.333 85.979 1.00 18.08
ATOM 4034 C GLN A 508 25.386 45.561 87.508 1.00 34.24
ATOM 4035 O GLN A 508 24.653 45.017 88.343 1.00 34.04
ATOM 4036 CB GLN A 508 25.713 43.917 85.608 1.00 10.94
ATOM 4037 CG GLN A 508 25.366 43.446 84.191 1.00 26.42
ATOM 4038 CD GLN A 508 25.635 41.944 84.002 1.00 52.93

ATOM 4039 OE1 GLN A 508 26.550 41.396 84.628 1.00 32.89
ATOM 4040 NE2 GLN A 508 24.864 41.252 83.147 1.00 34.36
ATOM 4041 N ARG A 509 26.380 46.361 87.901 1.00 33.73
ATOM 4042 CA ARG A 509 26.600 46.614 89.328 1.00 32.53
ATOM 4043 C ARG A 509 26.153 48.016 89.727 1.00 33.63
ATOM 4044 O ARG A 509 26.509 48.522 90.777 1.00 31.08
ATOM 4045 CB ARG A 509 28.055 46.440 89.760 1.00 29.22
ATOM 4046 CG ARG A 509 28.553 45.014 89.733 1.00 29.78
ATOM 4047 CD ARG A 509 27.744 44.054 90.609 1.00 30.86
ATOM 4048 NE ARG A 509 28.533 43.602 91.756 1.00 82.23
ATOM 4049 CZ ARG A 509 29.842 43.274 91.726 1.00100.00
ATOM 4050 NH1 ARG A 509 30.579 43.315 90.613 1.00 92.85
ATOM 4051 NH2 ARG A 509 30.430 42.881 92.855 1.00 91.85
ATOM 4052 N ALA A 510 25.384 48.659 88.880 1.00 32.59
ATOM 4053 CA ALA A 510 24.952 49.985 89.215 1.00 32.51
ATOM 4054 C ALA A 510 24.151 49.845 90.479 1.00 34.97
ATOM 4055 O ALA A 510 23.601 48.785 90.693 1.00 37.57
ATOM 4056 CB ALA A 510 24.189 50.622 88.063 1.00 32.91
ATOM 4057 N PRO A 511 24.174 50.856 91.334 1.00 25.14
ATOM 4058 CA PRO A 511 24.867 52.102 91.052 1.00 21.00
ATOM 4059 C PRO A 511 26.217 52.178 91.694 1.00 29.23
ATOM 4060 O PRO A 511 26.445 51.601 92.723 1.00 28.16
ATOM 4061 CB PRO A 511 24.102 53.169 91.818 1.00 21.55
ATOM 4062 CG PRO A 511 23.316 52.432 92.886 1.00 28.68
ATOM 4063 CD PRO A 511 23.169 50.995 92.407 1.00 25.16
ATOM 4064 N LEU A 512 27.094 52.968 91.109 1.00 32.95
ATOM 4065 CA LEU A 512 28.394 53.188 91.686 1.00 33.42
ATOM 4066 C LEU A 512 28.287 54.512 92.397 1.00 38.65
ATOM 4067 O LEU A 512 27.388 55.305 92.114 1.00 40.69
ATOM 4068 CB LEU A 512 29.453 53.350 90.587 1.00 34.40
ATOM 4069 CG LEU A 512 30.178 52.049 90.216 1.00 40.13
ATOM 4070 CD1 LEU A 512 29.222 51.086 89.508 1.00 39.04
ATOM 4071 CD2 LEU A 512 31.322 52.385 89.273 1.00 44.61
ATOM 4072 N PRO A 513 29.196 54.781 93.312 1.00 31.05
ATOM 4073 CA PRO A 513 29.167 56.058 94.008 1.00 27.16
ATOM 4074 C PRO A 513 29.296 57.203 93.019 1.00 23.76
ATOM 4075 O PRO A 513 30.121 57.182 92.118 1.00 27.17
ATOM 4076 CB PRO A 513 30.387 56.013 94.948 1.00 25.59
ATOM 4077 CG PRO A 513 30.702 54.542 95.149 1.00 27.14
ATOM 4078 CD PRO A 513 30.030 53.779 94.032 1.00 25.00
ATOM 4079 N LEU A 514 28.478 58.203 93.185 1.00 22.92
ATOM 4080 CA LEU A 514 28.516 59.350 92.279 1.00 27.55
ATOM 4081 C LEU A 514 29.930 59.766 91.940 1.00 31.95
ATOM 4082 O LEU A 514 30.287 59.908 90.765 1.00 37.11
ATOM 4083 CB LEU A 514 27.673 60.564 92.741 1.00 30.03
ATOM 4084 CG LEU A 514 27.428 61.626 91.648 1.00 32.87
ATOM 4085 CD1 LEU A 514 26.648 61.082 90.440 1.00 28.48
ATOM 4086 CD2 LEU A 514 26.699 62.780 92.272 1.00 31.16
ATOM 4087 N GLY A 515 30.731 59.989 92.979 1.00 24.42
ATOM 4088 CA GLY A 515 32.131 60.384 92.811 1.00 25.59
ATOM 4089 C GLY A 515 32.902 59.472 91.835 1.00 33.83
ATOM 4090 O GLY A 515 33.746 59.914 91.035 1.00 35.67
ATOM 4091 N HIS A 516 32.602 58.180 91.891 1.00 26.40
ATOM 4092 CA HIS A 516 33.257 57.255 90.998 1.00 25.86
ATOM 4093 C HIS A 516 32.911 57.578 89.560 1.00 27.62
ATOM 4094 O HIS A 516 33.786 57.596 88.695 1.00 28.67
ATOM 4095 CB HIS A 516 32.826 55.814 91.282 1.00 25.39
ATOM 4096 CG HIS A 516 33.452 55.283 92.505 1.00 27.96

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ATOM	4097	ND1	HIS	A	516	33.635	56.092	93.602	1.00	30.14
ATOM	4098	CD2	HIS	A	516	33.929	54.037	92.791	1.00	27.79
ATOM	4099	CE1	HIS	A	516	34.205	55.336	94.534	1.00	27.58
ATOM	4100	NE2	HIS	A	516	34.390	54.099	94.085	1.00	27.02
ATOM	4101	N	ILE	A	517	31.617	57.815	89.315	1.00	21.40
ATOM	4102	CA	ILE	A	517	31.137	58.107	87.973	1.00	22.75
ATOM	4103	C	ILE	A	517	31.706	59.424	87.462	1.00	31.09
ATOM	4104	O	ILE	A	517	32.246	59.558	86.352	1.00	28.78
ATOM	4105	CB	ILE	A	517	29.601	58.024	87.930	1.00	27.12
ATOM	4106	CG1	ILE	A	517	29.225	56.610	88.312	1.00	29.40
ATOM	4107	CG2	ILE	A	517	29.013	58.285	86.536	1.00	25.49
ATOM	4108	CD1	ILE	A	517	29.305	55.665	87.105	1.00	34.77
ATOM	4109	N	LYS	A	518	31.589	60.416	88.308	1.00	27.28
ATOM	4110	CA	LYS	A	518	32.108	61.690	87.955	1.00	23.77
ATOM	4111	C	LYS	A	518	33.558	61.482	87.485	1.00	24.03
ATOM	4112	O	LYS	A	518	33.982	61.831	86.391	1.00	26.08
ATOM	4113	CB	LYS	A	518	32.038	62.557	89.210	1.00	24.00
ATOM	4114	CG	LYS	A	518	30.641	63.060	89.591	1.00	19.24
ATOM	4115	CD	LYS	A	518	30.721	64.276	90.537	1.00	27.93
ATOM	4116	CE	LYS	A	518	29.379	64.877	90.962	1.00	37.11
ATOM	4117	NZ	LYS	A	518	28.924	65.988	90.104	1.00	52.30
ATOM	4118	N	ARG	A	519	34.322	60.899	88.361	1.00	17.90
ATOM	4119	CA	ARG	A	519	35.703	60.636	88.098	1.00	20.80
ATOM	4120	C	ARG	A	519	35.862	59.874	86.802	1.00	28.98
ATOM	4121	O	ARG	A	519	36.812	60.084	86.051	1.00	29.86
ATOM	4122	CB	ARG	A	519	36.313	59.844	89.276	1.00	20.56
ATOM	4123	CG	ARG	A	519	37.721	59.308	89.036	1.00	29.02
ATOM	4124	CD	ARG	A	519	38.668	60.320	88.404	1.00	41.17
ATOM	4125	NE	ARG	A	519	40.086	60.008	88.616	1.00	59.84
ATOM	4126	CZ	ARG	A	519	41.076	60.858	88.349	1.00	50.77
ATOM	4127	NH1	ARG	A	519	40.838	62.073	87.880	1.00	31.21
ATOM	4128	NH2	ARG	A	519	42.329	60.486	88.543	1.00	31.86
ATOM	4129	N	MET	A	520	34.937	58.956	86.565	1.00	25.08
ATOM	4130	CA	MET	A	520	34.979	58.121	85.379	1.00	24.56
ATOM	4131	C	MET	A	520	34.906	58.918	84.086	1.00	29.37
ATOM	4132	O	MET	A	520	35.651	58.687	83.114	1.00	27.92
ATOM	4133	CB	MET	A	520	33.905	57.007	85.442	1.00	26.98
ATOM	4134	CG	MET	A	520	34.082	55.902	84.399	1.00	28.02
ATOM	4135	SD	MET	A	520	32.830	54.591	84.479	1.00	27.87
ATOM	4136	CE	MET	A	520	33.246	53.825	86.070	1.00	22.09
ATOM	4137	N	GLN	A	521	33.982	59.864	84.067	1.00	28.32
ATOM	4138	CA	GLN	A	521	33.838	60.672	82.886	1.00	28.34
ATOM	4139	C	GLN	A	521	35.067	61.540	82.785	1.00	36.52
ATOM	4140	O	GLN	A	521	35.514	61.879	81.707	1.00	35.87
ATOM	4141	CB	GLN	A	521	32.514	61.451	82.863	1.00	28.34
ATOM	4142	CG	GLN	A	521	32.564	62.774	82.079	1.00	9.68
ATOM	4143	CD	GLN	A	521	32.890	62.572	80.616	1.00	27.55
ATOM	4144	OE1	GLN	A	521	33.382	63.491	79.924	1.00	28.25
ATOM	4145	NE2	GLN	A	521	32.657	61.368	80.142	1.00	25.70
ATOM	4146	N	GLU	A	522	35.626	61.827	83.963	1.00	36.19
ATOM	4147	CA	GLU	A	522	36.818	62.648	84.171	1.00	36.13
ATOM	4148	C	GLU	A	522	38.136	62.046	83.662	1.00	42.48
ATOM	4149	O	GLU	A	522	39.099	62.735	83.335	1.00	42.40
ATOM	4150	CB	GLU	A	522	36.857	63.035	85.641	1.00	37.79
ATOM	4151	CG	GLU	A	522	38.233	63.196	86.273	1.00	58.85
ATOM	4152	CD	GLU	A	522	38.046	64.040	87.493	1.00	73.64
ATOM	4153	OE1	GLU	A	522	37.006	64.641	87.709	1.00	45.66
ATOM	4154	OE2	GLU	A	522	39.081	64.037	88.289	1.00	47.91

ATOM	4155	N	VAL	A	523	38.188	60.739	83.552	1.00	40.13
ATOM	4156	CA	VAL	A	523	39.401	60.136	83.058	1.00	37.49
ATOM	4157	C	VAL	A	523	39.205	59.351	81.778	1.00	38.88
ATOM	4158	O	VAL	A	523	40.195	59.016	81.138	1.00	40.21
ATOM	4159	CB	VAL	A	523	40.184	59.370	84.102	1.00	40.01
ATOM	4160	CG1	VAL	A	523	40.231	60.165	85.413	1.00	39.12
ATOM	4161	CG2	VAL	A	523	39.534	58.017	84.320	1.00	39.82
ATOM	4162	N	TYR	A	524	37.952	59.048	81.379	1.00	30.35
ATOM	4163	CA	TYR	A	524	37.801	58.330	80.114	1.00	28.11
ATOM	4164	C	TYR	A	524	37.061	59.144	79.074	1.00	33.14
ATOM	4165	O	TYR	A	524	37.076	58.802	77.908	1.00	35.84
ATOM	4166	CB	TYR	A	524	37.281	56.878	80.119	1.00	25.56
ATOM	4167	CG	TYR	A	524	37.941	55.960	81.111	1.00	20.87
ATOM	4168	CD1	TYR	A	524	39.324	55.938	81.258	1.00	21.59
ATOM	4169	CD2	TYR	A	524	37.170	55.083	81.879	1.00	19.80
ATOM	4170	CE1	TYR	A	524	39.905	55.063	82.176	1.00	25.64
ATOM	4171	CE2	TYR	A	524	37.731	54.227	82.827	1.00	18.61
ATOM	4172	CZ	TYR	A	524	39.116	54.231	82.969	1.00	19.81
ATOM	4173	OH	TYR	A	524	39.706	53.402	83.863	1.00	23.92
ATOM	4174	N	ASN	A	525	36.416	60.221	79.496	1.00	25.98
ATOM	4175	CA	ASN	A	525	35.687	61.088	78.588	1.00	25.01
ATOM	4176	C	ASN	A	525	34.661	60.354	77.735	1.00	29.86
ATOM	4177	O	ASN	A	525	34.533	60.535	76.499	1.00	29.39
ATOM	4178	CB	ASN	A	525	36.637	61.922	77.739	1.00	29.55
ATOM	4179	CG	ASN	A	525	35.949	62.980	76.894	1.00	30.32
ATOM	4180	OD1	ASN	A	525	36.460	63.332	75.850	1.00	32.77
ATOM	4181	ND2	ASN	A	525	34.822	63.527	77.344	1.00	13.80
ATOM	4182	N	PHE	A	526	33.924	59.512	78.436	1.00	24.21
ATOM	4183	CA	PHE	A	526	32.900	58.745	77.807	1.00	25.14
ATOM	4184	C	PHE	A	526	31.846	59.631	77.214	1.00	31.74
ATOM	4185	O	PHE	A	526	31.161	59.241	76.272	1.00	34.99
ATOM	4186	CB	PHE	A	526	32.256	57.732	78.781	1.00	26.60
ATOM	4187	CG	PHE	A	526	33.115	56.499	78.978	1.00	23.82
ATOM	4188	CD1	PHE	A	526	34.017	56.080	78.000	1.00	25.00
ATOM	4189	CD2	PHE	A	526	33.031	55.767	80.159	1.00	21.74
ATOM	4190	CE1	PHE	A	526	34.783	54.927	78.173	1.00	27.63
ATOM	4191	CE2	PHE	A	526	33.817	54.634	80.370	1.00	25.42
ATOM	4192	CZ	PHE	A	526	34.683	54.202	79.364	1.00	25.28
ATOM	4193	N	ASN	A	527	31.689	60.815	77.760	1.00	28.22
ATOM	4194	CA	ASN	A	527	30.657	61.688	77.214	1.00	31.18
ATOM	4195	C	ASN	A	527	30.884	62.046	75.744	1.00	33.17
ATOM	4196	O	ASN	A	527	29.965	62.394	74.999	1.00	30.80
ATOM	4197	CB	ASN	A	527	30.479	62.967	78.052	1.00	36.41
ATOM	4198	CG	ASN	A	527	29.638	62.752	79.292	1.00	46.99
ATOM	4199	OD1	ASN	A	527	29.647	63.571	80.209	1.00	36.82
ATOM	4200	ND2	ASN	A	527	28.922	61.636	79.338	1.00	43.55
ATOM	4201	N	ALA	A	528	32.136	61.947	75.348	1.00	27.46
ATOM	4202	CA	ALA	A	528	32.581	62.278	74.005	1.00	26.48
ATOM	4203	C	ALA	A	528	32.335	61.188	72.950	1.00	32.09
ATOM	4204	O	ALA	A	528	32.420	61.404	71.753	1.00	32.09
ATOM	4205	CB	ALA	A	528	34.076	62.584	74.105	1.00	26.04
ATOM	4206	N	ILE	A	529	32.067	59.983	73.402	1.00	31.35
ATOM	4207	CA	ILE	A	529	31.854	58.859	72.529	1.00	28.47
ATOM	4208	C	ILE	A	529	30.492	58.904	71.887	1.00	35.96
ATOM	4209	O	ILE	A	529	29.486	59.023	72.578	1.00	38.79
ATOM	4210	CB	ILE	A	529	32.103	57.544	73.264	1.00	30.17
ATOM	4211	CG1	ILE	A	529	33.622	57.291	73.392	1.00	31.37
ATOM	4212	CG2	ILE	A	529	31.428	56.411	72.489	1.00	27.63

ATOM 4213 CD1 ILE A 529 34.059 56.515 74.635 1.00 33.41
ATOM 4214 N ASN A 530 30.462 58.806 70.559 1.00 34.86
ATOM 4215 CA ASN A 530 29.196 58.841 69.852 1.00 36.44
ATOM 4216 C ASN A 530 28.596 57.495 69.473 1.00 39.90
ATOM 4217 O ASN A 530 27.452 57.437 69.043 1.00 41.37
ATOM 4218 CB ASN A 530 28.951 60.044 68.928 1.00 51.44
ATOM 4219 CG ASN A 530 28.461 61.253 69.732 1.00100.00
ATOM 4220 OD1 ASN A 530 27.652 61.109 70.665 1.00100.00
ATOM 4221 ND2 ASN A 530 28.955 62.442 69.392 1.00 91.39
ATOM 4222 N ASN A 531 29.368 56.403 69.688 1.00 30.37
ATOM 4223 CA ASN A 531 28.912 55.030 69.446 1.00 28.14
ATOM 4224 C ASN A 531 27.696 54.753 70.360 1.00 32.80
ATOM 4225 O ASN A 531 27.746 54.887 71.611 1.00 36.74
ATOM 4226 CB ASN A 531 30.092 54.066 69.690 1.00 24.31
ATOM 4227 CG ASN A 531 29.770 52.601 69.730 1.00 34.44
ATOM 4228 OD1 ASN A 531 28.795 52.182 70.359 1.00 36.49
ATOM 4229 ND2 ASN A 531 30.643 51.810 69.099 1.00 30.57
ATOM 4230 N SER A 532 26.570 54.403 69.734 1.00 22.02
ATOM 4231 CA SER A 532 25.325 54.183 70.459 1.00 19.67
ATOM 4232 C SER A 532 25.323 53.208 71.627 1.00 26.15
ATOM 4233 O SER A 532 24.767 53.475 72.680 1.00 26.64
ATOM 4234 CB SER A 532 24.090 54.034 69.582 1.00 26.92
ATOM 4235 OG SER A 532 24.294 53.211 68.452 1.00 23.59
ATOM 4236 N GLU A 533 25.929 52.062 71.423 1.00 22.68
ATOM 4237 CA GLU A 533 25.995 51.036 72.420 1.00 22.97
ATOM 4238 C GLU A 533 26.677 51.569 73.635 1.00 30.48
ATOM 4239 O GLU A 533 26.125 51.539 74.749 1.00 31.13
ATOM 4240 CB GLU A 533 26.683 49.779 71.850 1.00 23.96
ATOM 4241 CG GLU A 533 25.827 49.146 70.733 1.00 20.82
ATOM 4242 CD GLU A 533 24.611 48.450 71.276 1.00 40.65
ATOM 4243 OE1 GLU A 533 24.432 48.256 72.476 1.00 36.25
ATOM 4244 OE2 GLU A 533 23.782 48.038 70.339 1.00 25.87
ATOM 4245 N ILE A 534 27.872 52.101 73.392 1.00 26.20
ATOM 4246 CA ILE A 534 28.622 52.672 74.484 1.00 26.32
ATOM 4247 C ILE A 534 27.900 53.849 75.121 1.00 27.83
ATOM 4248 O ILE A 534 27.697 53.911 76.326 1.00 26.54
ATOM 4249 CB ILE A 534 30.051 53.022 74.102 1.00 29.16
ATOM 4250 CG1 ILE A 534 30.738 51.808 73.479 1.00 29.47
ATOM 4251 CG2 ILE A 534 30.801 53.458 75.353 1.00 28.28
ATOM 4252 CD1 ILE A 534 32.038 52.184 72.765 1.00 34.99
ATOM 4253 N ARG A 535 27.480 54.805 74.320 1.00 24.30
ATOM 4254 CA ARG A 535 26.804 55.898 74.949 1.00 22.51
ATOM 4255 C ARG A 535 25.573 55.401 75.701 1.00 28.19
ATOM 4256 O ARG A 535 25.212 55.808 76.791 1.00 32.61
ATOM 4257 CB ARG A 535 26.457 56.942 73.913 1.00 24.83
ATOM 4258 CG ARG A 535 25.970 58.229 74.541 1.00 21.49
ATOM 4259 CD ARG A 535 25.327 59.183 73.554 1.00 13.79
ATOM 4260 NE ARG A 535 25.194 60.457 74.213 1.00 31.38
ATOM 4261 CZ ARG A 535 26.256 61.140 74.554 1.00 29.41
ATOM 4262 NH1 ARG A 535 27.463 60.677 74.259 1.00 26.45
ATOM 4263 NH2 ARG A 535 26.110 62.302 75.195 1.00 19.99
ATOM 4264 N PHE A 536 24.911 54.466 75.126 1.00 23.44
ATOM 4265 CA PHE A 536 23.740 53.980 75.770 1.00 22.05
ATOM 4266 C PHE A 536 23.976 53.555 77.199 1.00 22.74
ATOM 4267 O PHE A 536 23.349 54.113 78.105 1.00 22.06
ATOM 4268 CB PHE A 536 23.117 52.865 74.919 1.00 23.17
ATOM 4269 CG PHE A 536 22.040 52.153 75.658 1.00 21.92
ATOM 4270 CD1 PHE A 536 20.933 52.845 76.150 1.00 22.66

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ATOM   4271  CD2 PHE A 536      22.145  50.783  75.882  1.00 23.25
ATOM   4272  CE1 PHE A 536      19.926  52.181  76.847  1.00 21.23
ATOM   4273  CE2 PHE A 536      21.147  50.101  76.576  1.00 24.70
ATOM   4274  CZ  PHE A 536      20.047  50.811  77.065  1.00 20.57
ATOM   4275  N   ARG A 537      24.863  52.560  77.364  1.00 18.22
ATOM   4276  CA  ARG A 537      25.239  51.995  78.665  1.00 19.20
ATOM   4277  C   ARG A 537      25.932  52.963  79.618  1.00 27.62
ATOM   4278  O   ARG A 537      25.803  52.845  80.837  1.00 26.73
ATOM   4279  CB  ARG A 537      26.035  50.709  78.556  1.00 18.91
ATOM   4280  CG  ARG A 537      25.318  49.656  77.708  1.00 16.55
ATOM   4281  CD  ARG A 537      26.181  48.426  77.387  1.00 21.58
ATOM   4282  NE  ARG A 537      25.341  47.357  76.886  1.00 28.42
ATOM   4283  CZ  ARG A 537      25.060  47.206  75.609  1.00 18.29
ATOM   4284  NH1 ARG A 537      25.569  48.004  74.703  1.00 22.46
ATOM   4285  NH2 ARG A 537      24.240  46.236  75.224  1.00 25.22
ATOM   4286  N   TRP A 538      26.668  53.930  79.064  1.00 24.21
ATOM   4287  CA  TRP A 538      27.337  54.918  79.867  1.00 22.11
ATOM   4288  C   TRP A 538      26.274  55.719  80.550  1.00 28.09
ATOM   4289  O   TRP A 538      26.320  55.951  81.741  1.00 27.39
ATOM   4290  CB  TRP A 538      28.064  55.888  78.949  1.00 20.48
ATOM   4291  CG  TRP A 538      28.606  57.157  79.580  1.00 21.29
ATOM   4292  CD1 TRP A 538      28.641  58.345  78.968  1.00 22.86
ATOM   4293  CD2 TRP A 538      29.286  57.352  80.845  1.00 21.79
ATOM   4294  NE1 TRP A 538      29.228  59.270  79.769  1.00 22.70
ATOM   4295  CE2 TRP A 538      29.643  58.696  80.911  1.00 24.79
ATOM   4296  CE3 TRP A 538      29.574  56.535  81.946  1.00 23.35
ATOM   4297  CZ2 TRP A 538      30.280  59.248  82.025  1.00 25.89
ATOM   4298  CZ3 TRP A 538      30.203  57.056  83.046  1.00 23.35
ATOM   4299  CH2 TRP A 538      30.562  58.405  83.081  1.00 24.89
ATOM   4300  N   LEU A 539      25.303  56.161  79.758  1.00 27.31
ATOM   4301  CA  LEU A 539      24.229  56.974  80.306  1.00 27.18
ATOM   4302  C   LEU A 539      23.369  56.245  81.332  1.00 28.25
ATOM   4303  O   LEU A 539      22.857  56.822  82.266  1.00 27.19
ATOM   4304  CB  LEU A 539      23.428  57.812  79.262  1.00 26.37
ATOM   4305  CG  LEU A 539      24.269  58.682  78.279  1.00 25.71
ATOM   4306  CD1 LEU A 539      23.369  59.424  77.290  1.00 21.79
ATOM   4307  CD2 LEU A 539      25.146  59.680  79.011  1.00 23.51
ATOM   4308  N   ARG A 540      23.199  54.960  81.188  1.00 27.56
ATOM   4309  CA  ARG A 540      22.390  54.283  82.170  1.00 26.88
ATOM   4310  C   ARG A 540      23.145  54.229  83.453  1.00 31.82
ATOM   4311  O   ARG A 540      22.618  54.448  84.539  1.00 32.72
ATOM   4312  CB  ARG A 540      22.034  52.888  81.732  1.00 24.48
ATOM   4313  CG  ARG A 540      21.447  52.885  80.331  1.00 32.96
ATOM   4314  CD  ARG A 540      20.695  51.597  80.090  1.00 33.19
ATOM   4315  NE  ARG A 540      19.660  51.414  81.085  1.00 33.95
ATOM   4316  CZ  ARG A 540      19.151  50.242  81.409  1.00 30.83
ATOM   4317  NH1 ARG A 540      19.564  49.132  80.849  1.00 25.37
ATOM   4318  NH2 ARG A 540      18.186  50.186  82.317  1.00 30.30
ATOM   4319  N   LEU A 541      24.414  53.948  83.318  1.00 28.93
ATOM   4320  CA  LEU A 541      25.239  53.895  84.505  1.00 26.36
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ATOM   4322  O   LEU A 541      24.632  55.246  86.439  1.00 31.62
ATOM   4323  CB  LEU A 541      26.702  53.586  84.094  1.00 23.61
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ATOM   4325  CD1 LEU A 541      27.387  52.411  86.190  1.00 25.02
ATOM   4326  CD2 LEU A 541      29.098  53.245  84.621  1.00 19.31
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ATOM   4328  CA  CYS A 542      25.115  57.661  85.105  1.00 31.76
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ATOM   4334  CA  ILE A 543      21.382  57.982  85.643  1.00 23.12
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ATOM   4337  CB  ILE A 543      20.340  57.627  84.585  1.00 23.75
ATOM   4338  CG1 ILE A 543      20.369  58.664  83.468  1.00 24.09
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ATOM   4348  OE1 GLN A 544      20.326  51.432  84.551  1.00 38.66
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ATOM   4370  CG  TRP A 547      26.254  62.591  87.206  1.00 22.57
ATOM   4371  CD1 TRP A 547      26.224  63.769  87.844  1.00 25.87
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ATOM   4375  CE3 TRP A 547      28.014  61.668  85.547  1.00 26.21
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ATOM   4377  CZ3 TRP A 547      29.195  62.009  84.923  1.00 28.70
ATOM   4378  CH2 TRP A 547      29.822  63.236  85.138  1.00 28.41
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ATOM	4391	O	ASP	A	549	23.760	65.869	82.697	1.00	32.05
ATOM	4392	CB	ASP	A	549	25.775	66.480	85.048	1.00	21.28
ATOM	4393	CG	ASP	A	549	26.076	67.463	86.130	1.00	37.74
ATOM	4394	OD1	ASP	A	549	25.432	68.479	86.297	1.00	48.21
ATOM	4395	OD2	ASP	A	549	27.076	67.115	86.882	1.00	46.51
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ATOM	4397	CA	ALA	A	550	23.445	63.133	82.965	1.00	26.74
ATOM	4398	C	ALA	A	550	22.019	63.171	82.431	1.00	32.35
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ATOM	4400	CB	ALA	A	550	23.812	61.713	83.372	1.00	25.48
ATOM	4401	N	ILE	A	551	21.123	63.795	83.192	1.00	28.71
ATOM	4402	CA	ILE	A	551	19.716	63.882	82.832	1.00	28.20
ATOM	4403	C	ILE	A	551	19.461	64.355	81.411	1.00	32.04
ATOM	4404	O	ILE	A	551	18.833	63.679	80.619	1.00	31.75
ATOM	4405	CB	ILE	A	551	18.876	64.641	83.868	1.00	30.29
ATOM	4406	CG1	ILE	A	551	19.038	63.985	85.226	1.00	31.50
ATOM	4407	CG2	ILE	A	551	17.391	64.661	83.475	1.00	24.75
ATOM	4408	CD1	ILE	A	551	18.072	64.561	86.253	1.00	31.62
ATOM	4409	N	PRO	A	552	19.969	65.529	81.099	1.00	33.75
ATOM	4410	CA	PRO	A	552	19.793	66.121	79.796	1.00	32.60
ATOM	4411	C	PRO	A	552	20.240	65.224	78.669	1.00	30.34
ATOM	4412	O	PRO	A	552	19.583	65.119	77.622	1.00	27.23
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ATOM	4421	CG	LEU	A	553	24.196	64.496	78.818	1.00	24.02
ATOM	4422	CD1	LEU	A	553	25.608	64.071	79.174	1.00	19.59
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ATOM	4424	N	ALA	A	554	20.563	61.973	78.754	1.00	30.05
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ATOM	4426	C	ALA	A	554	18.432	61.107	77.988	1.00	36.03
ATOM	4427	O	ALA	A	554	17.944	60.332	77.163	1.00	37.08
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ATOM	4430	CA	LEU	A	555	16.644	62.724	77.720	1.00	28.32
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ATOM	4439	C	LYS	A	556	18.369	62.591	73.800	1.00	35.11
ATOM	4440	O	LYS	A	556	17.670	62.491	72.796	1.00	41.80
ATOM	4441	CB	LYS	A	556	19.645	64.592	74.599	1.00	31.79
ATOM	4442	CG	LYS	A	556	20.101	65.139	73.250	1.00	63.55
ATOM	4443	CD	LYS	A	556	21.585	65.518	73.254	1.00	81.77
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ATOM 4449 O MET A 557 17.811 58.907 72.263 1.00 23.24
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ATOM 4451 CG MET A 557 20.533 58.163 73.368 1.00 29.37
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ATOM   4524  CE1 PHE A 566      21.432  50.958  71.900  1.00 23.73
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ATOM   4536  C   ARG A 568      13.486  52.226  77.882  1.00 28.61
ATOM   4537  O   ARG A 568      12.876  52.667  78.832  1.00 30.84
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ATOM   4539  CG  ARG A 568      11.342  50.919  75.088  1.00 29.19
ATOM   4540  CD  ARG A 568      10.550  49.660  74.799  1.00 19.19
ATOM   4541  NE  ARG A 568       9.707  49.343  75.917  1.00 28.72
ATOM   4542  CZ  ARG A 568       9.254  48.138  76.133  1.00 32.39
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ATOM   4550  CG  PRO A 569      16.330  50.034  77.592  1.00 32.42
ATOM   4551  CD  PRO A 569      15.234  50.829  76.893  1.00 29.82
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ATOM   4555  O   LEU A 570      15.532  56.506  81.028  1.00 34.02
ATOM   4556  CB  LEU A 570      17.021  56.110  77.932  1.00 37.06
ATOM   4557  CG  LEU A 570      18.387  55.701  77.343  1.00 41.39
ATOM   4558  CD1 LEU A 570      18.678  56.462  76.050  1.00 41.06
ATOM   4559  CD2 LEU A 570      19.497  55.984  78.353  1.00 37.42
ATOM   4560  N   PHE A 571      14.262  55.944  79.211  1.00 30.06
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ATOM 4561 CA PHE A 571 13.084 56.541 79.758 1.00 27.27
ATOM 4562 C PHE A 571 12.813 55.899 81.095 1.00 25.94
ATOM 4563 O PHE A 571 12.399 56.536 82.030 1.00 27.16
ATOM 4564 CB PHE A 571 11.888 56.375 78.828 1.00 27.60
ATOM 4565 CG PHE A 571 11.546 57.616 78.042 1.00 27.70
ATOM 4566 CD1 PHE A 571 11.193 58.820 78.651 1.00 29.97
ATOM 4567 CD2 PHE A 571 11.557 57.570 76.651 1.00 28.87
ATOM 4568 CE1 PHE A 571 10.861 59.953 77.910 1.00 28.24
ATOM 4569 CE2 PHE A 571 11.233 58.684 75.886 1.00 30.43
ATOM 4570 CZ PHE A 571 10.877 59.875 76.520 1.00 29.55
ATOM 4571 N LYS A 572 13.089 54.618 81.196 1.00 22.77
ATOM 4572 CA LYS A 572 12.845 53.946 82.468 1.00 25.43
ATOM 4573 C LYS A 572 13.783 54.425 83.561 1.00 34.48
ATOM 4574 O LYS A 572 13.351 54.920 84.602 1.00 35.11
ATOM 4575 CB LYS A 572 12.736 52.428 82.392 1.00 26.89
ATOM 4576 CG LYS A 572 11.303 51.911 82.326 1.00 44.03
ATOM 4577 CD LYS A 572 11.219 50.426 81.922 1.00 57.87
ATOM 4578 CE LYS A 572 10.975 50.204 80.422 1.00 65.25
ATOM 4579 NZ LYS A 572 11.535 48.954 79.850 1.00 61.06
ATOM 4580 N ASP A 573 15.074 54.292 83.319 1.00 31.94
ATOM 4581 CA ASP A 573 16.032 54.751 84.291 1.00 30.55
ATOM 4582 C ASP A 573 15.684 56.166 84.712 1.00 32.26
ATOM 4583 O ASP A 573 15.693 56.453 85.895 1.00 31.85
ATOM 4584 CB ASP A 573 17.453 54.788 83.718 1.00 32.87
ATOM 4585 CG ASP A 573 18.051 53.443 83.487 1.00 33.43
ATOM 4586 OD1 ASP A 573 17.517 52.422 83.853 1.00 29.11
ATOM 4587 OD2 ASP A 573 19.206 53.501 82.864 1.00 35.22
ATOM 4588 N LEU A 574 15.387 57.071 83.745 1.00 29.50
ATOM 4589 CA LEU A 574 15.062 58.461 84.109 1.00 27.65
ATOM 4590 C LEU A 574 13.887 58.577 85.075 1.00 32.88
ATOM 4591 O LEU A 574 13.864 59.411 85.962 1.00 31.04
ATOM 4592 CB LEU A 574 14.844 59.385 82.909 1.00 26.24
ATOM 4593 CG LEU A 574 16.068 59.567 82.027 1.00 30.41
ATOM 4594 CD1 LEU A 574 15.644 59.922 80.582 1.00 28.47
ATOM 4595 CD2 LEU A 574 16.974 60.659 82.604 1.00 27.06
ATOM 4596 N ALA A 575 12.895 57.723 84.874 1.00 32.80
ATOM 4597 CA ALA A 575 11.709 57.713 85.711 1.00 31.11
ATOM 4598 C ALA A 575 12.002 57.140 87.083 1.00 35.71
ATOM 4599 O ALA A 575 11.309 57.362 88.055 1.00 39.91
ATOM 4600 CB ALA A 575 10.631 56.890 85.024 1.00 30.56
ATOM 4601 N ALA A 576 13.049 56.364 87.170 1.00 28.55
ATOM 4602 CA ALA A 576 13.390 55.778 88.448 1.00 22.80
ATOM 4603 C ALA A 576 14.258 56.724 89.266 1.00 26.93
ATOM 4604 O ALA A 576 14.444 56.591 90.461 1.00 30.45
ATOM 4605 CB ALA A 576 14.023 54.415 88.245 1.00 20.31
ATOM 4606 N PHE A 577 14.787 57.686 88.584 1.00 22.86
ATOM 4607 CA PHE A 577 15.604 58.673 89.194 1.00 22.71
ATOM 4608 C PHE A 577 14.651 59.751 89.673 1.00 32.25
ATOM 4609 O PHE A 577 13.930 60.334 88.863 1.00 34.17
ATOM 4610 CB PHE A 577 16.640 59.188 88.154 1.00 22.89
ATOM 4611 CG PHE A 577 17.704 60.076 88.741 1.00 23.16
ATOM 4612 CD1 PHE A 577 17.847 60.231 90.120 1.00 26.60
ATOM 4613 CD2 PHE A 577 18.561 60.806 87.914 1.00 23.46
ATOM 4614 CE1 PHE A 577 18.818 61.082 90.661 1.00 27.55
ATOM 4615 CE2 PHE A 577 19.543 61.657 88.431 1.00 23.88
ATOM 4616 CZ PHE A 577 19.669 61.791 89.813 1.00 23.59
ATOM 4617 N ASP A 578 14.625 60.008 90.990 1.00 29.70
ATOM 4618 CA ASP A 578 13.717 61.018 91.533 1.00 28.65

ATOM 4619 C ASP A 578 13.862 62.357 90.881 1.00 28.55
ATOM 4620 O ASP A 578 12.877 63.004 90.599 1.00 32.65
ATOM 4621 CB ASP A 578 13.804 61.192 93.055 1.00 32.60
ATOM 4622 CG ASP A 578 15.153 61.647 93.550 1.00 53.21
ATOM 4623 OD1 ASP A 578 16.175 61.594 92.872 1.00 51.81
ATOM 4624 OD2 ASP A 578 15.104 62.072 94.796 1.00 64.93
ATOM 4625 N LYS A 579 15.104 62.750 90.674 1.00 20.12
ATOM 4626 CA LYS A 579 15.470 64.012 90.084 1.00 21.01
ATOM 4627 C LYS A 579 14.934 64.270 88.697 1.00 30.25
ATOM 4628 O LYS A 579 14.620 65.413 88.368 1.00 35.12
ATOM 4629 CB LYS A 579 16.982 64.223 90.104 1.00 24.11
ATOM 4630 CG LYS A 579 17.552 64.202 91.512 1.00 48.98
ATOM 4631 CD LYS A 579 17.252 65.488 92.286 1.00 76.92
ATOM 4632 CE LYS A 579 16.495 65.258 93.588 1.00 87.93
ATOM 4633 NZ LYS A 579 17.282 64.550 94.611 1.00 89.56
ATOM 4634 N SER A 580 14.838 63.244 87.857 1.00 28.66
ATOM 4635 CA SER A 580 14.368 63.437 86.459 1.00 28.56
ATOM 4636 C SER A 580 13.007 62.829 86.129 1.00 32.95
ATOM 4637 O SER A 580 12.561 62.870 84.992 1.00 35.30
ATOM 4638 CB SER A 580 15.337 62.774 85.517 1.00 25.69
ATOM 4639 OG SER A 580 15.476 61.424 85.969 1.00 25.12
ATOM 4640 N HIS A 581 12.364 62.230 87.098 1.00 26.81
ATOM 4641 CA HIS A 581 11.100 61.595 86.850 1.00 28.26
ATOM 4642 C HIS A 581 10.067 62.399 86.042 1.00 36.50
ATOM 4643 O HIS A 581 9.644 62.031 84.927 1.00 34.71
ATOM 4644 CB HIS A 581 10.553 61.047 88.152 1.00 29.76
ATOM 4645 CG HIS A 581 9.148 60.588 87.968 1.00 35.31
ATOM 4646 ND1 HIS A 581 8.111 61.494 87.899 1.00 38.92
ATOM 4647 CD2 HIS A 581 8.634 59.338 87.891 1.00 36.84
ATOM 4648 CE1 HIS A 581 6.999 60.783 87.817 1.00 38.85
ATOM 4649 NE2 HIS A 581 7.280 59.488 87.734 1.00 38.13
ATOM 4650 N ASP A 582 9.656 63.502 86.639 1.00 35.79
ATOM 4651 CA ASP A 582 8.680 64.388 86.064 1.00 34.39
ATOM 4652 C ASP A 582 9.035 64.807 84.659 1.00 37.82
ATOM 4653 O ASP A 582 8.220 64.704 83.735 1.00 37.01
ATOM 4654 CB ASP A 582 8.428 65.552 87.001 1.00 36.57
ATOM 4655 CG ASP A 582 7.597 65.110 88.167 1.00 58.09
ATOM 4656 OD1 ASP A 582 6.708 64.289 88.070 1.00 63.17
ATOM 4657 OD2 ASP A 582 7.920 65.708 89.279 1.00 73.96
ATOM 4658 N GLN A 583 10.272 65.255 84.488 1.00 32.88
ATOM 4659 CA GLN A 583 10.750 65.648 83.169 1.00 29.92
ATOM 4660 C GLN A 583 10.690 64.464 82.168 1.00 37.12
ATOM 4661 O GLN A 583 10.362 64.624 80.990 1.00 37.42
ATOM 4662 CB GLN A 583 12.172 66.182 83.287 1.00 28.54
ATOM 4663 CG GLN A 583 12.704 66.648 81.929 1.00 48.12
ATOM 4664 CD GLN A 583 13.957 67.475 82.081 1.00 64.09
ATOM 4665 OE1 GLN A 583 14.736 67.248 83.015 1.00 59.43
ATOM 4666 NE2 GLN A 583 14.130 68.461 81.201 1.00 55.34
ATOM 4667 N ALA A 584 11.009 63.250 82.638 1.00 33.22
ATOM 4668 CA ALA A 584 10.964 62.062 81.780 1.00 32.22
ATOM 4669 C ALA A 584 9.557 61.841 81.315 1.00 37.45
ATOM 4670 O ALA A 584 9.319 61.526 80.152 1.00 40.05
ATOM 4671 CB ALA A 584 11.389 60.793 82.504 1.00 31.62
ATOM 4672 N VAL A 585 8.622 61.995 82.261 1.00 30.42
ATOM 4673 CA VAL A 585 7.217 61.806 81.946 1.00 29.16
ATOM 4674 C VAL A 585 6.647 62.909 81.024 1.00 36.53
ATOM 4675 O VAL A 585 5.933 62.690 80.052 1.00 36.22
ATOM 4676 CB VAL A 585 6.408 61.567 83.209 1.00 29.78

ATOM 4677 CG1 VAL A 585 4.959 61.947 82.955 1.00 30.03
ATOM 4678 CG2 VAL A 585 6.464 60.085 83.539 1.00 27.82
ATOM 4679 N ARG A 586 7.000 64.123 81.333 1.00 35.76
ATOM 4680 CA ARG A 586 6.574 65.242 80.562 1.00 36.20
ATOM 4681 C ARG A 586 7.146 65.125 79.180 1.00 44.65
ATOM 4682 O ARG A 586 6.459 65.355 78.197 1.00 48.32
ATOM 4683 CB ARG A 586 7.116 66.498 81.208 1.00 38.13
ATOM 4684 CG ARG A 586 6.744 67.799 80.518 1.00 61.01
ATOM 4685 CD ARG A 586 7.077 69.029 81.354 1.00 73.03
ATOM 4686 NE ARG A 586 8.491 69.128 81.711 1.00 86.05
ATOM 4687 CZ ARG A 586 8.961 69.001 82.957 1.00 98.46
ATOM 4688 NH1 ARG A 586 8.167 68.741 84.004 1.00 79.75
ATOM 4689 NH2 ARG A 586 10.268 69.103 83.159 1.00 77.55
ATOM 4690 N THR A 587 8.426 64.769 79.110 1.00 39.49
ATOM 4691 CA THR A 587 9.099 64.646 77.822 1.00 36.80
ATOM 4692 C THR A 587 8.387 63.690 76.869 1.00 37.11
ATOM 4693 O THR A 587 8.229 63.931 75.678 1.00 36.91
ATOM 4694 CB THR A 587 10.634 64.384 77.917 1.00 39.40
ATOM 4695 OG1 THR A 587 11.303 65.334 78.717 1.00 46.27
ATOM 4696 CG2 THR A 587 11.233 64.460 76.529 1.00 32.60
ATOM 4697 N TYR A 588 7.934 62.587 77.393 1.00 33.33
ATOM 4698 CA TYR A 588 7.252 61.639 76.555 1.00 33.94
ATOM 4699 C TYR A 588 5.890 62.146 76.090 1.00 37.02
ATOM 4700 O TYR A 588 5.428 61.880 74.988 1.00 41.55
ATOM 4701 CB TYR A 588 7.042 60.383 77.396 1.00 33.96
ATOM 4702 CG TYR A 588 6.017 59.440 76.851 1.00 33.08
ATOM 4703 CD1 TYR A 588 6.331 58.640 75.754 1.00 35.64
ATOM 4704 CD2 TYR A 588 4.758 59.288 77.437 1.00 34.09
ATOM 4705 CE1 TYR A 588 5.424 57.703 75.251 1.00 34.36
ATOM 4706 CE2 TYR A 588 3.822 58.378 76.932 1.00 34.05
ATOM 4707 CZ TYR A 588 4.162 57.581 75.834 1.00 33.89
ATOM 4708 OH TYR A 588 3.275 56.674 75.322 1.00 23.43
ATOM 4709 N GLN A 589 5.216 62.853 76.959 1.00 25.04
ATOM 4710 CA GLN A 589 3.914 63.339 76.612 1.00 21.41
ATOM 4711 C GLN A 589 3.992 64.304 75.481 1.00 28.78
ATOM 4712 O GLN A 589 3.099 64.410 74.678 1.00 31.24
ATOM 4713 CB GLN A 589 3.241 63.935 77.832 1.00 21.73
ATOM 4714 CG GLN A 589 2.878 62.820 78.827 1.00 22.30
ATOM 4715 CD GLN A 589 1.695 62.069 78.293 1.00 52.83
ATOM 4716 OE1 GLN A 589 1.511 62.003 77.075 1.00 60.15
ATOM 4717 NE2 GLN A 589 0.864 61.542 79.182 1.00 53.04
ATOM 4718 N GLU A 590 5.099 65.001 75.409 1.00 28.36
ATOM 4719 CA GLU A 590 5.276 65.966 74.355 1.00 26.87
ATOM 4720 C GLU A 590 5.840 65.338 73.140 1.00 35.10
ATOM 4721 O GLU A 590 6.096 66.059 72.171 1.00 40.28
ATOM 4722 CB GLU A 590 6.323 67.011 74.747 1.00 27.61
ATOM 4723 CG GLU A 590 5.846 67.954 75.847 1.00 44.11
ATOM 4724 CD GLU A 590 6.981 68.759 76.388 1.00 75.35
ATOM 4725 OE1 GLU A 590 8.120 68.689 75.925 1.00 54.78
ATOM 4726 OE2 GLU A 590 6.609 69.516 77.403 1.00 59.46
ATOM 4727 N HIS A 591 6.091 64.031 73.207 1.00 27.57
ATOM 4728 CA HIS A 591 6.713 63.384 72.086 1.00 25.58
ATOM 4729 C HIS A 591 5.928 62.249 71.578 1.00 32.34
ATOM 4730 O HIS A 591 6.184 61.751 70.496 1.00 38.53
ATOM 4731 CB HIS A 591 8.094 62.851 72.487 1.00 26.32
ATOM 4732 CG HIS A 591 9.219 63.809 72.268 1.00 31.06
ATOM 4733 ND1 HIS A 591 9.630 64.680 73.255 1.00 32.65
ATOM 4734 CD2 HIS A 591 9.998 64.032 71.169 1.00 34.91

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ATOM   4735  CE1 HIS A 591      10.635  65.404  72.756  1.00 32.01
ATOM   4736  NE2 HIS A 591      10.884  65.037  71.508  1.00 33.36
ATOM   4737  N   LYS A 592       4.978  61.812  72.337  1.00 28.34
ATOM   4738  CA  LYS A 592       4.254  60.643  71.849  1.00 29.96
ATOM   4739  C   LYS A 592       3.654  60.692  70.432  1.00 33.41
ATOM   4740  O   LYS A 592       3.819  59.769  69.592  1.00 29.05
ATOM   4741  CB  LYS A 592       3.362  59.983  72.888  1.00 32.83
ATOM   4742  CG  LYS A 592       2.435  60.930  73.615  1.00 31.14
ATOM   4743  CD  LYS A 592       1.677  60.203  74.704  1.00 38.97
ATOM   4744  CE  LYS A 592       0.253  60.691  74.890  1.00 25.02
ATOM   4745  NZ  LYS A 592      -0.157  60.632  76.302  1.00 45.83
ATOM   4746  N   ALA A 593       2.934  61.782  70.187  1.00 30.97
ATOM   4747  CA  ALA A 593       2.260  62.026  68.917  1.00 28.47
ATOM   4748  C   ALA A 593       3.169  61.943  67.703  1.00 32.66
ATOM   4749  O   ALA A 593       2.775  61.488  66.639  1.00 36.77
ATOM   4750  CB  ALA A 593       1.571  63.379  68.954  1.00 27.35
ATOM   4751  N   SER A 594       4.384  62.405  67.869  1.00 27.08
ATOM   4752  CA  SER A 594       5.345  62.417  66.794  1.00 30.04
ATOM   4753  C   SER A 594       6.185  61.169  66.760  1.00 36.80
ATOM   4754  O   SER A 594       6.995  60.991  65.848  1.00 37.94
ATOM   4755  CB  SER A 594       6.292  63.596  66.977  1.00 37.69
ATOM   4756  OG  SER A 594       7.199  63.340  68.043  1.00 54.55
ATOM   4757  N   MET A 595       6.015  60.340  67.776  1.00 33.12
ATOM   4758  CA  MET A 595       6.794  59.115  67.898  1.00 33.96
ATOM   4759  C   MET A 595       6.200  57.936  67.125  1.00 40.91
ATOM   4760  O   MET A 595       5.019  57.927  66.809  1.00 50.82
ATOM   4761  CB  MET A 595       6.716  58.686  69.382  1.00 34.22
ATOM   4762  CG  MET A 595       7.621  59.371  70.399  1.00 34.61
ATOM   4763  SD  MET A 595       7.606  58.440  71.962  1.00 39.24
ATOM   4764  CE  MET A 595       7.145  59.779  73.084  1.00 36.72
ATOM   4765  N   HIS A 596       6.987  56.897  66.886  1.00 26.19
ATOM   4766  CA  HIS A 596       6.496  55.657  66.246  1.00 23.19
ATOM   4767  C   HIS A 596       5.438  54.964  67.120  1.00 25.21
ATOM   4768  O   HIS A 596       5.621  54.728  68.311  1.00 22.59
ATOM   4769  CB  HIS A 596       7.657  54.655  66.077  1.00 24.41
ATOM   4770  CG  HIS A 596       7.222  53.366  65.493  1.00 30.13
ATOM   4771  ND1 HIS A 596       7.606  52.995  64.214  1.00 32.86
ATOM   4772  CD2 HIS A 596       6.421  52.385  66.005  1.00 30.90
ATOM   4773  CE1 HIS A 596       7.047  51.824  63.974  1.00 30.05
ATOM   4774  NE2 HIS A 596       6.325  51.441  65.031  1.00 30.20
ATOM   4775  N   PRO A 597       4.334  54.587  66.512  1.00 27.08
ATOM   4776  CA  PRO A 597       3.217  53.912  67.173  1.00 26.35
ATOM   4777  C   PRO A 597       3.513  52.851  68.248  1.00 37.51
ATOM   4778  O   PRO A 597       2.979  52.900  69.348  1.00 41.16
ATOM   4779  CB  PRO A 597       2.334  53.307  66.076  1.00 26.17
ATOM   4780  CG  PRO A 597       3.140  53.426  64.792  1.00 34.56
ATOM   4781  CD  PRO A 597       4.285  54.418  65.050  1.00 30.06
ATOM   4782  N   VAL A 598       4.311  51.850  67.939  1.00 33.08
ATOM   4783  CA  VAL A 598       4.585  50.802  68.911  1.00 28.39
ATOM   4784  C   VAL A 598       5.444  51.307  70.029  1.00 29.32
ATOM   4785  O   VAL A 598       5.168  51.096  71.217  1.00 29.13
ATOM   4786  CB  VAL A 598       5.196  49.599  68.210  1.00 27.99
ATOM   4787  CG1 VAL A 598       5.806  48.608  69.187  1.00 26.98
ATOM   4788  CG2 VAL A 598       4.144  48.944  67.296  1.00 26.13
ATOM   4789  N   THR A 599       6.480  52.021  69.635  1.00 26.10
ATOM   4790  CA  THR A 599       7.370  52.573  70.631  1.00 26.95
ATOM   4791  C   THR A 599       6.650  53.404  71.669  1.00 30.81
ATOM   4792  O   THR A 599       6.863  53.327  72.871  1.00 31.33
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ATOM 4793 CB THR A 599 8.413 53.455 69.975 1.00 26.67
ATOM 4794 OG1 THR A 599 9.092 52.725 68.958 1.00 27.92
ATOM 4795 CG2 THR A 599 9.358 53.884 71.092 1.00 20.69
ATOM 4796 N ALA A 600 5.801 54.218 71.135 1.00 26.41
ATOM 4797 CA ALA A 600 4.997 55.111 71.878 1.00 26.39
ATOM 4798 C ALA A 600 4.176 54.339 72.860 1.00 32.00
ATOM 4799 O ALA A 600 4.162 54.597 74.057 1.00 35.37
ATOM 4800 CB ALA A 600 4.090 55.774 70.856 1.00 27.56
ATOM 4801 N MET A 601 3.470 53.380 72.332 1.00 26.26
ATOM 4802 CA MET A 601 2.627 52.585 73.167 1.00 26.60
ATOM 4803 C MET A 601 3.439 51.909 74.225 1.00 25.73
ATOM 4804 O MET A 601 3.099 51.964 75.381 1.00 25.77
ATOM 4805 CB MET A 601 1.752 51.625 72.353 1.00 30.49
ATOM 4806 CG MET A 601 1.024 50.594 73.176 1.00 36.00
ATOM 4807 SD MET A 601 2.043 49.146 73.554 1.00 42.41
ATOM 4808 CE MET A 601 1.693 48.128 72.111 1.00 37.75
ATOM 4809 N LEU A 602 4.538 51.310 73.848 1.00 21.64
ATOM 4810 CA LEU A 602 5.339 50.671 74.873 1.00 22.59
ATOM 4811 C LEU A 602 6.010 51.650 75.870 1.00 29.61
ATOM 4812 O LEU A 602 6.137 51.346 77.039 1.00 27.62
ATOM 4813 CB LEU A 602 6.418 49.760 74.294 1.00 22.14
ATOM 4814 CG LEU A 602 5.916 48.529 73.575 1.00 25.78
ATOM 4815 CD1 LEU A 602 7.021 48.087 72.609 1.00 26.02
ATOM 4816 CD2 LEU A 602 5.651 47.445 74.613 1.00 21.01
ATOM 4817 N VAL A 603 6.508 52.805 75.445 1.00 27.15
ATOM 4818 CA VAL A 603 7.145 53.684 76.413 1.00 26.39
ATOM 4819 C VAL A 603 6.121 54.157 77.438 1.00 32.60
ATOM 4820 O VAL A 603 6.436 54.235 78.621 1.00 35.31
ATOM 4821 CB VAL A 603 7.917 54.832 75.760 1.00 27.78
ATOM 4822 CG1 VAL A 603 8.286 55.887 76.774 1.00 24.54
ATOM 4823 CG2 VAL A 603 9.172 54.286 75.094 1.00 27.29
ATOM 4824 N GLY A 604 4.878 54.434 76.976 1.00 27.44
ATOM 4825 CA GLY A 604 3.759 54.856 77.819 1.00 27.58
ATOM 4826 C GLY A 604 3.418 53.797 78.905 1.00 37.00
ATOM 4827 O GLY A 604 3.088 54.102 80.072 1.00 36.56
ATOM 4828 N LYS A 605 3.511 52.522 78.520 1.00 32.54
ATOM 4829 CA LYS A 605 3.250 51.415 79.459 1.00 32.17
ATOM 4830 C LYS A 605 4.312 51.405 80.539 1.00 35.15
ATOM 4831 O LYS A 605 4.040 51.347 81.734 1.00 33.77
ATOM 4832 CB LYS A 605 3.231 50.034 78.782 1.00 33.59
ATOM 4833 CG LYS A 605 1.837 49.438 78.576 1.00 42.45
ATOM 4834 CD LYS A 605 1.846 48.115 77.815 1.00 60.83
ATOM 4835 CE LYS A 605 1.223 46.946 78.578 1.00 86.38
ATOM 4836 NZ LYS A 605 2.188 46.179 79.385 1.00 93.05
ATOM 4837 N ASP A 606 5.544 51.470 80.056 1.00 32.91
ATOM 4838 CA ASP A 606 6.715 51.510 80.878 1.00 31.82
ATOM 4839 C ASP A 606 6.549 52.667 81.833 1.00 36.24
ATOM 4840 O ASP A 606 6.652 52.503 83.045 1.00 35.19
ATOM 4841 CB ASP A 606 7.983 51.702 80.027 1.00 32.52
ATOM 4842 CG ASP A 606 8.302 50.525 79.134 1.00 40.01
ATOM 4843 OD1 ASP A 606 7.934 49.378 79.344 1.00 40.49
ATOM 4844 OD2 ASP A 606 9.038 50.869 78.111 1.00 41.73
ATOM 4845 N LEU A 607 6.240 53.833 81.266 1.00 34.45
ATOM 4846 CA LEU A 607 6.152 54.972 82.185 1.00 36.03
ATOM 4847 C LEU A 607 4.814 55.018 82.968 1.00 42.35
ATOM 4848 O LEU A 607 4.600 55.872 83.824 1.00 41.57
ATOM 4849 CB LEU A 607 6.321 56.250 81.364 1.00 36.90
ATOM 4850 CG LEU A 607 7.779 56.490 80.974 1.00 38.75

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ATOM   4851  CD1 LEU A 607       7.954  57.746  80.132  1.00 34.34
ATOM   4852  CD2 LEU A 607       8.695  56.653  82.183  1.00 41.97
ATOM   4853  N   LYS A 608       3.895  54.062  82.586  1.00 45.01
ATOM   4854  CA  LYS A 608       2.576  53.874  83.264  1.00 46.99
ATOM   4855  C   LYS A 608       1.625  55.088  83.181  1.00 51.31
ATOM   4856  O   LYS A 608       0.988  55.467  84.151  1.00 51.35
ATOM   4857  CB  LYS A 608       2.813  53.510  84.750  1.00 50.83
ATOM   4858  CG  LYS A 608       3.331  52.093  84.949  1.00 63.57
ATOM   4859  CD  LYS A 608       4.405  52.019  86.031  1.00 77.03
ATOM   4860  CE  LYS A 608       5.341  50.825  85.858  1.00 96.40
ATOM   4861  NZ  LYS A 608       6.034  50.554  87.117  1.00100.00
ATOM   4862  N   VAL A 609       1.560  55.724  81.991  1.00 50.28
ATOM   4863  CA  VAL A 609       0.688  56.901  81.852  1.00 50.89
ATOM   4864  C   VAL A 609      -0.494  56.660  80.897  1.00 60.23
ATOM   4865  O   VAL A 609      -1.640  56.952  81.194  1.00 63.02
ATOM   4866  CB  VAL A 609       1.533  58.091  81.364  1.00 54.72
ATOM   4867  CG1 VAL A 609       1.996  58.926  82.551  1.00 54.87
ATOM   4868  CG2 VAL A 609       2.744  57.607  80.605  1.00 54.46
ATOM   4869  N   ASP A 610      -0.177  56.152  79.687  1.00 58.84
ATOM   4870  CA  ASP A 610      -1.238  55.949  78.699  1.00 99.84
ATOM   4871  C   ASP A 610      -2.062  54.695  79.001  1.00100.00
ATOM   4872  O   ASP A 610      -3.247  54.615  78.711  1.00 69.75
ATOM   4873  CB  ASP A 610      -0.594  55.818  77.316  1.00100.00
ATOM   4874  CG  ASP A 610      -0.637  57.161  76.610  1.00 92.61
ATOM   4875  OD1 ASP A 610      -1.449  57.999  77.018  1.00 90.49
ATOM   4876  OD2 ASP A 610       0.134  57.355  75.670  1.00 89.29
ATOM   4877 ZN2+ ZN  Z   1      17.003  38.803  64.180  1.00 28.37
ATOM   4878 YB3+ YB  Y   1      43.011  51.068  98.864  1.00 34.70
ATOM   4879 YB3+ YB  Y   2     -13.786  56.771  52.040  0.50 57.25
ATOM   4880 YB3+ YB  Y   3     -10.537  57.860  52.381  0.50 36.57
ATOM   4881  CG  IMD I   1      26.249  42.039  80.754  1.00 28.44
ATOM   4882  ND1 IMD I   1      26.057  42.254  79.400  1.00 28.35
ATOM   4883  CD2 IMD I   1      27.562  41.726  80.902  1.00 17.99
ATOM   4884  CE1 IMD I   1      27.201  42.063  78.760  1.00 29.77
ATOM   4885  NE2 IMD I   1      28.130  41.745  79.647  1.00 35.02
ATOM   4886  CB  ACE C   1      13.616  12.333  68.475  1.00 59.33
ATOM   4887  CG  ACE C   1      12.871  13.331  69.306  1.00 42.98
ATOM   4888  OD1 ACE C   1      12.958  14.536  69.146  1.00 39.66
ATOM   4889  OD2 ACE C   1      12.142  12.759  70.236  1.00 47.21
ATOM   4890  C6  INH V   1       7.422  38.514  70.154  1.00 38.70
ATOM   4891  C5  INH V   1       7.571  39.820  69.689  1.00 37.05
ATOM   4892  C4  INH V   1       7.901  40.062  68.354  1.00 31.41
ATOM   4893  C3  INH V   1       8.091  38.967  67.505  1.00 35.48
ATOM   4894  C2  INH V   1       7.944  37.650  67.949  1.00 31.90
ATOM   4895  C1  INH V   1       7.611  37.434  69.286  1.00 36.93
ATOM   4896  C7  INH V   1       8.071  41.463  67.833  1.00 32.28
ATOM   4897  O1  INH V   1       8.288  41.443  66.485  1.00 37.06
ATOM   4898  C8  INH V   1       9.584  41.740  66.129  1.00 32.34
ATOM   4899  C9  INH V   1       9.825  42.911  65.416  1.00 31.03
ATOM   4900  C10 INH V   1      11.127  43.216  65.023  1.00 33.64
ATOM   4901  C11 INH V   1      12.194  42.381  65.339  1.00 31.88
ATOM   4902  C12 INH V   1      11.928  41.198  66.028  1.00 31.07
ATOM   4903  C13 INH V   1      10.630  40.858  66.412  1.00 28.70
ATOM   4904  C14 INH V   1      13.587  42.710  64.882  1.00 32.51
ATOM   4905  C15 INH V   1      14.260  41.560  64.121  1.00 34.69
ATOM   4906  C16 INH V   1      15.683  41.849  63.754  1.00 28.88
ATOM   4907  S1  INH V   1      16.605  40.755  64.790  1.00 29.16
ATOM   4908  N1  INH V   1      13.497  40.805  63.099  1.00 30.69
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ATOM	4909	O	HOH	W	1	44.463	49.888	77.523	1.00	46.91
ATOM	4910	O	HOH	W	2	13.469	27.803	78.018	1.00	20.07
ATOM	4911	O	HOH	W	3	4.225	69.721	58.393	1.00	27.76
ATOM	4912	O	HOH	W	4	15.603	28.826	61.823	1.00	22.81
ATOM	4913	O	HOH	W	5	22.862	26.624	42.874	1.00	53.05
ATOM	4914	O	HOH	W	6	8.423	46.452	57.584	1.00	32.22
ATOM	4915	O	HOH	W	7	17.904	46.550	68.524	1.00	31.91
ATOM	4916	O	HOH	W	8	22.979	45.895	83.716	1.00	39.37
ATOM	4917	O	HOH	W	9	17.707	39.158	55.643	1.00	25.27
ATOM	4918	O	HOH	W	10	12.439	36.303	59.209	1.00	31.46
ATOM	4919	O	HOH	W	11	17.367	62.730	50.320	1.00	37.74
ATOM	4920	O	HOH	W	12	42.823	52.642	90.552	1.00	53.80
ATOM	4921	O	HOH	W	13	34.337	45.508	97.419	1.00	57.99
ATOM	4922	O	HOH	W	14	6.726	27.119	48.459	1.00	62.29
ATOM	4923	O	HOH	W	15	-0.093	30.159	71.746	1.00	29.96
ATOM	4924	O	HOH	W	16	-19.673	44.016	58.682	1.00	58.64
ATOM	4925	O	HOH	W	17	16.563	26.790	80.837	1.00	38.62
ATOM	4926	O	HOH	W	18	10.281	35.677	88.518	1.00	26.01
ATOM	4927	O	HOH	W	19	20.973	35.691	44.774	1.00	49.50
ATOM	4928	O	HOH	W	20	0.996	19.571	53.713	1.00	67.39
ATOM	4929	O	HOH	W	21	20.424	37.014	85.845	1.00	39.54
ATOM	4930	O	HOH	W	22	-2.498	35.905	53.781	1.00	51.70
ATOM	4931	O	HOH	W	23	39.807	49.718	92.595	1.00	37.39
ATOM	4932	O	HOH	W	24	16.431	58.267	93.127	1.00	47.45
ATOM	4933	O	HOH	W	25	6.935	45.104	66.012	1.00	18.12
ATOM	4934	O	HOH	W	26	40.479	54.713	100.253	1.00	28.72
ATOM	4935	O	HOH	W	27	22.369	40.324	67.919	1.00	46.36
ATOM	4936	O	HOH	W	28	37.289	49.457	68.016	1.00	61.37
ATOM	4937	O	HOH	W	29	2.611	35.015	55.709	1.00	24.45
ATOM	4938	O	HOH	W	30	41.088	62.590	98.644	1.00	65.38
ATOM	4939	O	HOH	W	31	17.369	55.024	87.465	1.00	24.22
ATOM	4940	O	HOH	W	32	25.433	20.198	55.692	1.00	44.61
ATOM	4941	O	HOH	W	33	3.890	42.770	66.651	1.00	22.34
ATOM	4942	O	HOH	W	34	3.934	63.391	62.592	1.00	60.69
ATOM	4943	O	HOH	W	35	22.280	41.610	86.289	1.00	74.20
ATOM	4944	O	HOH	W	36	22.631	46.401	90.078	1.00	47.44
ATOM	4945	O	HOH	W	37	33.442	20.227	64.569	1.00	55.41
ATOM	4946	O	HOH	W	38	39.834	28.974	75.602	1.00	41.72
ATOM	4947	O	HOH	W	39	35.232	47.140	54.186	1.00	37.08
ATOM	4948	O	HOH	W	40	36.003	57.784	57.893	1.00	43.05
ATOM	4949	O	HOH	W	41	37.216	27.438	74.564	1.00	50.79
ATOM	4950	O	HOH	W	42	17.770	67.012	77.183	1.00	45.78
ATOM	4951	O	HOH	W	43	5.341	31.286	78.127	1.00	25.34
ATOM	4952	O	HOH	W	44	33.535	32.503	52.063	1.00	56.13
ATOM	4953	O	HOH	W	45	25.477	33.146	44.610	1.00	65.43
ATOM	4954	O	HOH	W	46	16.235	37.438	52.628	1.00	32.10
ATOM	4955	O	HOH	W	47	28.791	14.101	63.316	1.00	46.67
ATOM	4956	O	HOH	W	48	10.230	24.992	86.967	1.00	38.63
ATOM	4957	O	HOH	W	49	30.821	38.856	79.630	1.00	40.44
ATOM	4958	O	HOH	W	50	12.621	37.226	62.944	1.00	26.70
ATOM	4959	O	HOH	W	51	27.987	30.609	66.612	1.00	33.55
ATOM	4960	O	HOH	W	52	34.459	28.696	64.242	1.00	51.01
ATOM	4961	O	HOH	W	53	34.969	62.270	91.179	1.00	68.20
ATOM	4962	O	HOH	W	54	33.631	30.717	62.396	1.00	41.64
ATOM	4963	O	HOH	W	55	43.987	48.530	91.269	1.00	50.99
ATOM	4964	O	HOH	W	56	23.412	28.584	85.186	1.00	69.23
ATOM	4965	O	HOH	W	57	39.834	28.057	72.257	1.00	81.00
ATOM	4966	O	HOH	W	58	2.892	25.685	69.907	1.00	38.96

ATOM 4967 O HOH W 59 10.284 47.120 72.671 1.00 40.28
ATOM 4968 O HOH W 60 32.645 39.037 76.746 1.00 21.71
ATOM 4969 O HOH W 61 43.535 48.019 95.228 1.00 37.69
ATOM 4970 O HOH W 62 11.991 51.053 43.479 1.00 41.05
ATOM 4971 O HOH W 63 18.329 56.527 89.388 1.00 28.51
ATOM 4972 O HOH W 64 16.555 9.309 68.875 1.00 89.05
ATOM 4973 O HOH W 65 23.741 44.759 73.150 1.00 38.43
ATOM 4974 O HOH W 66 19.093 53.805 41.239 1.00 55.25
ATOM 4975 O HOH W 67 31.750 60.369 56.933 1.00 92.26
ATOM 4976 O HOH W 68 24.836 68.428 80.926 1.00 59.25
ATOM 4977 O HOH W 69 -21.014 19.446 48.342 1.00 52.24
ATOM 4978 O HOH W 70 11.318 68.028 86.566 1.00 77.81
ATOM 4979 O HOH W 71 5.312 60.076 63.511 1.00 36.83
ATOM 4980 O HOH W 72 7.689 20.219 84.680 1.00 32.24
ATOM 4981 O HOH W 73 34.988 44.708 64.746 1.00 40.73
ATOM 4982 O HOH W 74 10.614 49.644 41.337 1.00 38.90
ATOM 4983 O HOH W 75 19.349 42.973 64.739 1.00 54.53
ATOM 4984 O HOH W 76 35.916 30.862 80.753 1.00 55.38
ATOM 4985 O HOH W 77 9.666 26.046 46.603 1.00 40.09
ATOM 4986 O HOH W 78 -10.171 46.751 60.237 1.00 29.78
ATOM 4987 O HOH W 79 46.751 58.883 86.875 1.00 35.92
ATOM 4988 O HOH W 80 19.320 32.528 51.000 1.00 33.36
ATOM 4989 O HOH W 81 28.815 39.568 66.176 1.00 59.19
ATOM 4990 O HOH W 82 38.207 35.773 73.585 1.00 17.81
ATOM 4991 O HOH W 83 23.802 33.925 75.175 1.00 25.19
ATOM 4992 O HOH W 84 42.241 51.290 99.896 1.00 15.88
ATOM 4993 O HOH W 85 3.751 36.678 58.842 1.00 24.97
ATOM 4994 O HOH W 86 -7.009 40.341 62.580 1.00 25.39
ATOM 4995 O HOH W 87 11.735 58.910 68.155 1.00 39.70
ATOM 4996 O HOH W 88 13.986 52.835 42.224 1.00 50.91
ATOM 4997 O HOH W 89 1.452 46.541 69.459 1.00 35.03
ATOM 4998 O HOH W 90 -1.938 55.310 56.971 1.00 28.10
ATOM 4999 O HOH W 91 13.801 66.947 52.600 1.00 38.65
ATOM 5000 O HOH W 92 21.594 47.218 79.203 1.00 30.31
ATOM 5001 O HOH W 93 10.639 58.632 90.827 1.00 43.78
ATOM 5002 O HOH W 94 33.335 53.550 68.086 1.00 37.04
ATOM 5003 O HOH W 95 -1.984 28.738 60.212 1.00 31.56
ATOM 5004 O HOH W 96 -4.958 51.055 59.250 1.00 34.00
ATOM 5005 O HOH W 97 17.610 39.701 51.503 1.00 28.27
ATOM 5006 O HOH W 98 10.686 54.166 67.565 1.00 37.68
ATOM 5007 O HOH W 99 20.567 43.859 78.621 1.00 41.57
ATOM 5008 O HOH W 100 7.013 22.332 69.109 1.00 28.72
ATOM 5009 O HOH W 101 10.097 53.225 78.477 1.00 35.68
ATOM 5010 O HOH W 102 10.849 31.404 53.014 1.00 32.22
ATOM 5011 O HOH W 103 42.381 59.035 94.728 1.00 36.00
ATOM 5012 O HOH W 104 17.234 41.111 54.082 1.00 33.65
ATOM 5013 O HOH W 105 26.902 62.025 81.989 1.00 34.70
ATOM 5014 O HOH W 106 -14.313 49.559 56.204 1.00 54.36
ATOM 5015 O HOH W 107 41.646 57.501 101.015 1.00 68.12
ATOM 5016 O HOH W 108 26.759 43.000 47.219 1.00 32.69
ATOM 5017 O HOH W 109 16.624 48.119 46.545 1.00 38.64
ATOM 5018 O HOH W 110 26.159 32.793 75.230 1.00 24.77
ATOM 5019 O HOH W 111 2.101 33.468 67.006 1.00 31.50
ATOM 5020 O HOH W 112 38.114 36.374 87.451 1.00 44.06
ATOM 5021 O HOH W 113 13.211 29.810 61.356 1.00 33.81
ATOM 5022 O HOH W 114 -3.064 37.863 40.673 1.00 37.92
ATOM 5023 O HOH W 115 15.007 47.948 69.488 1.00 28.23
ATOM 5024 O HOH W 116 27.101 66.633 80.518 1.00 41.24

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ATOM   5025  O   HOH W 117      11.870  38.304  43.174  1.00 40.85
ATOM   5026  O   HOH W 118     -13.844  25.597  58.258  1.00 53.75
ATOM   5027  O   HOH W 119       2.929  41.135  59.858  1.00 36.49
ATOM   5028  O   HOH W 120      24.890  45.490  82.167  1.00 41.65
ATOM   5029  O   HOH W 121      36.062  59.335  75.090  1.00 38.82
ATOM   5030  O   HOH W 122     -10.715  32.037  61.699  1.00 78.82
ATOM   5031  O   HOH W 123      -2.646  25.492  60.812  1.00 48.40
ATOM   5032  O   HOH W 124      -8.948  46.831  63.556  1.00 48.06
ATOM   5033  O   HOH W 125     -17.843  39.367  36.020  1.00 35.80
ATOM   5034  O   HOH W 126       2.218  57.766  62.253  1.00 44.61
ATOM   5035  O   HOH W 127      10.736  62.766  64.366  1.00 55.84
ATOM   5036  O   HOH W 128       0.884  35.562  63.963  1.00 44.14
ATOM   5037  O   HOH W 129      19.165  59.557  60.644  1.00 47.82
ATOM   5038  O   HOH W 130       1.546  27.875  68.443  1.00 39.69
ATOM   5039  O   HOH W 131       5.497  26.285  76.668  1.00 44.47
ATOM   5040  O   HOH W 132      14.505  36.538  88.996  1.00 40.00
ATOM   5041  O   HOH W 133       8.534  28.713  88.519  1.00 46.55
ATOM   5042  O   HOH W 134       6.125  45.267  77.959  1.00 45.57
ATOM   5043  O   HOH W 135      26.016  18.543  78.878  1.00 51.65
ATOM   5044  O   HOH W 136      33.880  23.025  70.739  1.00 46.95
ATOM   5045  O   HOH W 137      19.230  26.073  49.998  1.00 51.97
ATOM   5046  O   HOH W 138      41.563  41.085  77.326  1.00 43.14
ATOM   5047  O   HOH W 139      39.187  63.067  75.380  1.00 56.52
ATOM   5048  O   HOH W 140      26.878  54.491  67.203  1.00 42.14
ATOM   5049  O   HOH W 141      22.988  62.189  74.174  1.00 48.31
ATOM   5050  O   HOH W 142      25.190  62.803  71.067  1.00 67.16
ATOM   5051  O   HOH W 143      18.598  45.126  81.949  1.00 53.80
ATOM   5052  O   HOH W 144      19.782  53.129  90.556  1.00 48.73
ATOM   5053  O   HOH W 145      21.735  48.367  86.454  1.00 40.39
ATOM   5054  O   HOH W 146      25.707  57.012  93.476  1.00 53.61
ATOM   5055  O   HOH W 147      22.832  62.085  93.149  1.00 46.02
ATOM   5056  O   HOH W 148      25.725  67.203  89.990  1.00 75.23
ATOM   5057  O   HOH W 149      10.773  53.653  85.697  1.00 50.65
ATOM   5058  O   HOH W 150       4.221  58.449  86.608  1.00 49.23
ATOM   5059  O   HOH W 151       7.790  72.096  84.410  1.00 51.10
ATOM   5060  O   HOH W 152       2.387  58.282  67.835  1.00 33.29
ATOM   5061  O   HOH W 153       0.921  49.551  69.095  1.00 59.60
ATOM   5062  O   HOH W 154       8.722  45.171  71.561  1.00 46.56
ATOM   5063  O   HOH W 155       6.422  47.947  81.081  1.00 57.56
ATOM   5064  O   HOH W 156      15.936  56.908  55.129  1.00 43.33
ATOM   5065  O   HOH W 157       3.032  19.635  62.453  1.00 80.38
ATOM   5066  O   HOH W 158      -4.228  58.058  47.057  1.00 39.66
ATOM   5067  O   HOH W 159       1.197  41.002  78.942  1.00 57.22
ATOM   5068  O   HOH W 160       1.259  43.651  68.100  1.00 37.94
ATOM   5069  O   HOH W 161      25.799  64.833  56.690  1.00 38.96
ATOM   5070  O   HOH W 162     -11.853  45.054  45.070  1.00 38.38
ATOM   5071  O   HOH W 163      40.159  31.033  78.548  1.00 75.36
ATOM   5072  O   HOH W 164      21.477  20.377  79.349  1.00 35.96
ATOM   5073  O   HOH W 165      26.347  44.558  72.803  1.00 42.21
ATOM   5074  O   HOH W 166      16.446  61.207  59.687  1.00 39.70
ATOM   5075  O   HOH W 167      27.695  64.216  82.410  1.00 44.71
ATOM   5076  O   HOH W 168      -2.998  57.511  34.738  1.00 45.35
ATOM   5077  O   HOH W 169       6.608  51.527  60.826  1.00 39.48
ATOM   5078  O   HOH W 170      31.104  28.934  81.337  1.00 43.19
ATOM   5079  O   HOH W 171      10.135  28.233  45.533  1.00 41.24
ATOM   5080  O   HOH W 172       8.201  43.960  75.322  1.00 37.71
ATOM   5081  O   HOH W 173      13.799  66.601  85.597  1.00 34.74
ATOM   5082  O   HOH W 174      16.664  53.670  65.006  1.00 43.69
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ATOM 5083 O HOH W 175 18.301 47.296 43.793 1.00 45.84
ATOM 5084 O HOH W 176 11.717 61.868 52.648 1.00 34.93
ATOM 5085 O HOH W 177 29.516 23.822 76.838 1.00 51.50
ATOM 5086 O HOH W 178 39.940 60.509 78.535 1.00 46.33
ATOM 5087 O HOH W 179 -1.803 44.974 37.278 1.00 52.56
ATOM 5088 O HOH W 180 7.343 47.305 65.468 1.00 47.27
ATOM 5089 O HOH W 181 17.912 15.338 81.793 1.00 50.08
ATOM 5090 O HOH W 182 -4.631 55.917 82.183 1.00 65.36
ATOM 5091 O HOH W 183 32.973 42.656 86.667 1.00 43.97
ATOM 5092 O HOH W 184 -1.834 36.784 71.040 1.00 45.10
ATOM 5093 O HOH W 185 -4.519 34.633 71.838 1.00 43.99
ATOM 5094 O HOH W 186 4.518 68.554 71.661 1.00 46.99
ATOM 5095 O HOH W 187 2.774 37.503 61.490 1.00 45.81
ATOM 5096 O HOH W 188 31.770 43.526 51.410 1.00 58.02
ATOM 5097 O HOH W 189 5.471 43.861 38.891 1.00 49.43
ATOM 5098 O HOH W 190 11.934 58.219 70.811 1.00 49.96
ATOM 5099 O HOH W 191 33.112 26.203 70.484 1.00 60.03
ATOM 5100 O HOH W 192 30.914 43.017 70.613 1.00 73.23
ATOM 5101 O HOH W 193 0.400 39.300 39.714 1.00 65.37
ATOM 5102 O HOH W 194 48.247 56.159 86.370 1.00 60.09
ATOM 5103 O HOH W 195 12.359 59.992 62.698 1.00 53.57
ATOM 5104 O HOH W 196 11.149 17.504 78.264 1.00 54.43
ATOM 5105 O HOH W 197 -4.284 31.953 60.991 1.00 47.12
ATOM 5106 O HOH W 198 29.888 35.624 82.772 1.00 52.16
ATOM 5107 O HOH W 199 14.388 39.115 89.656 1.00 47.93
ATOM 5108 O HOH W 200 -8.529 51.475 47.745 1.00 61.00
ATOM 5109 O HOH W 201 -15.572 53.338 52.008 1.00 72.42
ATOM 5110 O HOH W 202 24.319 38.590 87.128 1.00 50.03
ATOM 5111 O HOH W 203 25.366 70.670 82.839 1.00 49.01
ATOM 5112 O HOH W 204 18.531 27.749 86.236 1.00 48.64
ATOM 5113 O HOH W 205 21.694 20.030 81.796 1.00 49.04
ATOM 5114 O HOH W 206 23.953 47.993 67.580 1.00 40.39
ATOM 5115 O HOH W 207 22.012 40.217 90.228 1.00 42.29
ATOM 5116 O HOH W 208 16.197 45.094 43.427 1.00 48.00
ATOM 5117 O HOH W 209 21.019 68.985 84.382 1.00 56.50
ATOM 5118 O HOH W 210 -7.134 33.015 71.591 1.00 56.31
ATOM 5119 O HOH W 211 40.843 44.050 89.284 1.00 43.07
ATOM 5120 O HOH W 212 20.374 14.856 56.642 1.00 50.07
ATOM 5121 O HOH W 213 12.723 46.277 73.748 1.00 59.15
ATOM 5122 O HOH W 214 8.956 43.704 58.706 1.00 45.56
ATOM 5123 O HOH W 215 -2.433 36.012 80.232 1.00 54.12
ATOM 5124 O HOH W 216 5.257 25.271 55.914 1.00 53.23
ATOM 5125 O HOH W 217 13.354 64.403 53.862 1.00 47.27
ATOM 5126 O HOH W 218 30.477 42.517 67.472 1.00 48.17
ATOM 5127 O HOH W 219 14.139 47.479 76.123 1.00 79.04
ATOM 5128 O HOH W 220 0.829 29.563 50.769 1.00 48.10
ATOM 5129 O HOH W 221 32.979 51.667 96.624 1.00 51.30
ATOM 5130 O HOH W 222 14.677 45.948 71.756 1.00 52.31
ATOM 5131 O HOH W 223 33.890 24.505 58.094 1.00 43.65
ATOM 5132 O HOH W 224 17.853 9.519 65.560 1.00 55.94
ATOM 5133 O HOH W 225 37.794 31.473 62.305 1.00 50.38
ATOM 5134 O HOH W 226 29.206 50.335 62.673 1.00 45.43
ATOM 5135 O HOH W 227 4.932 48.808 63.354 1.00 42.45
ATOM 5136 O HOH W 228 18.933 59.070 55.899 1.00 50.29
ATOM 5137 O HOH W 229 13.849 18.833 83.641 1.00 55.89
ATOM 5138 O HOH W 230 25.919 46.022 68.076 1.00 35.63
ATOM 5139 O HOH W 231 27.565 65.098 75.153 1.00 73.11
ATOM 5140 O HOH W 232 27.128 39.012 68.497 1.00 40.77

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ATOM   5141  O   HOH W 233      40.706  52.468  74.641  1.00 51.60
ATOM   5142  O   HOH W 234      21.689  65.312  58.080  1.00 66.72
ATOM   5143  O   HOH W 235       9.121  17.615  59.271  1.00 51.98
ATOM   5144  O   HOH W 236      17.931  36.565  88.091  1.00 54.77
ATOM   5145  O   HOH W 237      33.843  36.707  52.576  1.00 61.60
ATOM   5146  O   HOH W 238      -3.693  50.074  63.986  1.00 43.64
ATOM   5147  O   HOH W 239      44.272  44.279  81.461  1.00 69.21
ATOM   5148  O   HOH W 240       2.092  28.868  52.894  1.00 54.01
ATOM   5149  O   HOH W 241       8.309  33.518  71.442  1.00 68.05
ATOM   5150  O   HOH W 242       1.051  31.947  69.204  1.00 52.88
ATOM   5151  O   HOH W 243      44.255  51.162  96.650  1.00 20.00
ATOM   5152  O   HOH W 244      16.173  45.408  46.636  1.00 20.00
ATOM   5153  O   HOH W 245      41.130  50.734  97.991  1.00 20.00
ATOM   5154  O   HOH W 246      36.912  36.263  75.911  1.00 20.00
ATOM   5155  O   HOH W 247     -17.107  27.146  54.728  1.00 20.00
ATOM   5156  O   HOH W 248      24.078  46.307  79.123  1.00 20.00
ATOM   5157  O   HOH W 249     -12.250  47.964  61.593  1.00 20.00
ATOM   5158  O   HOH W 250      35.804  51.343  51.682  1.00 20.00
ATOM   5159  O   HOH W 251      25.537  59.940  69.750  1.00 20.00
ATOM   5160  O   HOH W 252       0.539  55.427  62.088  1.00 20.00
END
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6,6,2,2,6,6,6,6,6,6

Table 11: Structure coordinates of LTA_4 hydrolase-hydroxamic acid complex

CRYST	67.770	132.470	83.700	90.00	90.00	90.00	P21212		
	Atom	res.	Chain	No.	x	y	z	occ	B-factor
ATOM	1	N	PRO	A	1	-2.215	16.942	65.912	1.00	98.67
ATOM	2	CA	PRO	A	1	-2.492	18.109	66.739	1.00	96.57
ATOM	3	C	PRO	A	1	-1.985	19.345	66.046	1.00	90.92
ATOM	4	O	PRO	A	1	-0.791	19.459	65.732	1.00	87.94
ATOM	5	CB	PRO	A	1	-1.747	17.907	68.073	1.00	98.18
ATOM	6	CG	PRO	A	1	-1.000	16.573	67.973	1.00	100.00
ATOM	7	CD	PRO	A	1	-1.249	16.011	66.573	1.00	97.96
ATOM	8	N	GLU	A	2	-2.895	20.262	65.790	1.00	83.08
ATOM	9	CA	GLU	A	2	-2.492	21.448	65.116	1.00	81.25
ATOM	10	C	GLU	A	2	-1.948	22.471	66.074	1.00	80.21
ATOM	11	O	GLU	A	2	-2.444	22.625	67.189	1.00	80.90
ATOM	12	CB	GLU	A	2	-3.549	22.038	64.168	1.00	82.10
ATOM	13	CG	GLU	A	2	-2.895	22.838	63.023	1.00	92.94
ATOM	14	CD	GLU	A	2	-1.451	22.466	62.778	1.00	95.77
ATOM	15	OE1	GLU	A	2	-0.520	23.237	62.917	1.00	94.64
ATOM	16	OE2	GLU	A	2	-1.307	21.231	62.383	1.00	74.00
ATOM	17	N	ILE	A	3	-0.898	23.141	65.624	1.00	69.91
ATOM	18	CA	ILE	A	3	-0.300	24.192	66.393	1.00	66.19
ATOM	19	C	ILE	A	3	-1.124	25.431	66.042	1.00	60.35
ATOM	20	O	ILE	A	3	-1.438	25.713	64.866	1.00	60.57
ATOM	21	CB	ILE	A	3	1.215	24.316	66.167	1.00	69.46
ATOM	22	CG1	ILE	A	3	1.919	23.117	66.809	1.00	69.22
ATOM	23	CG2	ILE	A	3	1.772	25.604	66.769	1.00	70.57
ATOM	24	CD1	ILE	A	3	2.674	23.468	68.090	1.00	67.16
ATOM	25	N	VAL	A	4	-1.546	26.135	67.071	1.00	47.12
ATOM	26	CA	VAL	A	4	-2.372	27.296	66.856	1.00	43.66
ATOM	27	C	VAL	A	4	-1.621	28.601	66.943	1.00	36.61
ATOM	28	O	VAL	A	4	-0.804	28.799	67.843	1.00	33.97
ATOM	29	CB	VAL	A	4	-3.580	27.282	67.811	1.00	46.37
ATOM	30	CG1	VAL	A	4	-4.296	28.636	67.855	1.00	44.31
ATOM	31	CG2	VAL	A	4	-4.552	26.203	67.353	1.00	45.89
ATOM	32	N	ASP	A	5	-1.920	29.496	65.997	1.00	25.42
ATOM	33	CA	ASP	A	5	-1.311	30.793	66.050	1.00	22.70
ATOM	34	C	ASP	A	5	-2.262	31.630	66.874	1.00	26.31
ATOM	35	O	ASP	A	5	-3.285	32.069	66.397	1.00	25.00
ATOM	36	CB	ASP	A	5	-1.083	31.454	64.687	1.00	23.91
ATOM	37	CG	ASP	A	5	-0.248	32.685	64.868	1.00	28.48
ATOM	38	OD1	ASP	A	5	-0.199	33.272	65.935	1.00	27.12
ATOM	39	OD2	ASP	A	5	0.383	33.068	63.776	1.00	23.01
ATOM	40	N	THR	A	6	-1.942	31.792	68.144	1.00	25.96
ATOM	41	CA	THR	A	6	-2.799	32.525	69.029	1.00	23.74
ATOM	42	C	THR	A	6	-2.689	34.005	68.859	1.00	27.92
ATOM	43	O	THR	A	6	-3.169	34.763	69.701	1.00	31.80
ATOM	44	CB	THR	A	6	-2.629	32.111	70.483	1.00	25.94
ATOM	45	OG1	THR	A	6	-1.315	32.422	70.891	1.00	40.88
ATOM	46	CG2	THR	A	6	-2.867	30.609	70.627	1.00	29.05
ATOM	47	N	CYS	A	7	-2.068	34.442	67.779	1.00	23.72
ATOM	48	CA	CYS	A	7	-1.967	35.893	67.566	1.00	24.38
ATOM	49	C	CYS	A	7	-2.737	36.321	66.325	1.00	28.42
ATOM	50	O	CYS	A	7	-2.766	37.475	65.965	1.00	27.59
ATOM	51	CB	CYS	A	7	-0.516	36.435	67.449	1.00	23.86
ATOM	52	SG	CYS	A	7	0.510	36.080	68.886	1.00	29.33

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ATOM     53  N   SER A   8      -3.324  35.370  65.638  1.00 27.23
ATOM     54  CA  SER A   8      -4.020  35.686  64.419  1.00 25.64
ATOM     55  C   SER A   8      -5.479  35.340  64.538  1.00 25.31
ATOM     56  O   SER A   8      -5.867  34.421  65.273  1.00 22.83
ATOM     57  CB  SER A   8      -3.368  34.908  63.278  1.00 26.35
ATOM     58  OG  SER A   8      -4.090  35.105  62.093  1.00 29.02
ATOM     59  N   LEU A   9      -6.298  36.071  63.799  1.00 20.95
ATOM     60  CA  LEU A   9      -7.720  35.750  63.869  1.00 20.81
ATOM     61  C   LEU A   9      -8.188  35.158  62.554  1.00 24.77
ATOM     62  O   LEU A   9      -9.364  34.872  62.381  1.00 28.22
ATOM     63  CB  LEU A   9      -8.573  36.991  64.170  1.00 20.29
ATOM     64  CG  LEU A   9      -8.171  37.744  65.434  1.00 21.06
ATOM     65  CD1 LEU A   9      -8.875  39.088  65.438  1.00 22.40
ATOM     66  CD2 LEU A   9      -8.576  36.926  66.656  1.00 15.77
ATOM     67  N   ALA A  10      -7.240  35.040  61.630  1.00 22.60
ATOM     68  CA  ALA A  10      -7.461  34.528  60.294  1.00 17.85
ATOM     69  C   ALA A  10      -7.633  33.039  60.254  1.00 23.94
ATOM     70  O   ALA A  10      -7.281  32.298  61.178  1.00 22.85
ATOM     71  CB  ALA A  10      -6.291  34.891  59.397  1.00 15.48
ATOM     72  N   SER A  11      -8.170  32.590  59.129  1.00 25.50
ATOM     73  CA  SER A  11      -8.306  31.156  58.921  1.00 27.59
ATOM     74  C   SER A  11      -6.887  30.575  58.992  1.00 25.13
ATOM     75  O   SER A  11      -5.938  31.112  58.437  1.00 26.43
ATOM     76  CB  SER A  11      -8.917  30.833  57.544  1.00 29.01
ATOM     77  OG  SER A  11     -10.241  31.338  57.445  1.00 28.50
ATOM     78  N   PRO A  12      -6.740  29.460  59.662  1.00 23.36
ATOM     79  CA  PRO A  12      -5.445  28.827  59.798  1.00 20.96
ATOM     80  C   PRO A  12      -4.949  28.121  58.533  1.00 34.02
ATOM     81  O   PRO A  12      -5.743  27.764  57.646  1.00 34.95
ATOM     82  CB  PRO A  12      -5.590  27.834  60.952  1.00 22.26
ATOM     83  CG  PRO A  12      -7.080  27.652  61.201  1.00 29.49
ATOM     84  CD  PRO A  12      -7.769  28.845  60.542  1.00 25.95
ATOM     85  N   ALA A  13      -3.615  27.927  58.479  1.00 29.46
ATOM     86  CA  ALA A  13      -2.922  27.276  57.385  1.00 25.81
ATOM     87  C   ALA A  13      -3.531  25.912  57.109  1.00 27.87
ATOM     88  O   ALA A  13      -3.320  25.321  56.072  1.00 30.10
ATOM     89  CB  ALA A  13      -1.458  27.115  57.746  1.00 25.60
ATOM     90  N   SER A  14      -4.288  25.389  58.038  1.00 20.61
ATOM     91  CA  SER A  14      -4.876  24.090  57.814  1.00 24.37
ATOM     92  C   SER A  14      -6.230  24.183  57.108  1.00 32.80
ATOM     93  O   SER A  14      -6.831  23.183  56.733  1.00 35.15
ATOM     94  CB  SER A  14      -5.031  23.366  59.137  1.00 29.06
ATOM     95  OG  SER A  14      -5.775  24.180  60.037  1.00 31.14
ATOM     96  N   VAL A  15      -6.721  25.392  56.944  1.00 24.99
ATOM     97  CA  VAL A  15      -7.984  25.582  56.278  1.00 25.26
ATOM     98  C   VAL A  15      -7.774  26.148  54.865  1.00 27.71
ATOM     99  O   VAL A  15      -8.348  25.688  53.886  1.00 27.54
ATOM    100  CB  VAL A  15      -8.876  26.466  57.127  1.00 29.72
ATOM    101  CG1 VAL A  15      -9.999  27.045  56.271  1.00 30.81
ATOM    102  CG2 VAL A  15      -9.411  25.656  58.298  1.00 27.89
ATOM    103  N   CYS A  16      -6.921  27.144  54.764  1.00 20.14
ATOM    104  CA  CYS A  16      -6.594  27.769  53.503  1.00 24.17
ATOM    105  C   CYS A  16      -5.265  28.490  53.629  1.00 26.96
ATOM    106  O   CYS A  16      -4.834  28.793  54.744  1.00 28.25
ATOM    107  CB  CYS A  16      -7.703  28.694  52.944  1.00 28.08
ATOM    108  SG  CYS A  16      -7.881  30.231  53.880  1.00 34.58
ATOM    109  N   ARG A  17      -4.622  28.749  52.496  1.00 20.39
ATOM    110  CA  ARG A  17      -3.344  29.409  52.520  1.00 22.15
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ATOM 111 C ARG A 17 -3.186 30.347 51.365 1.00 26.96
ATOM 112 O ARG A 17 -3.415 30.002 50.202 1.00 23.44
ATOM 113 CB ARG A 17 -2.147 28.451 52.443 1.00 26.39
ATOM 114 CG ARG A 17 -2.231 27.181 53.264 1.00 24.30
ATOM 115 CD ARG A 17 -1.416 26.086 52.599 1.00 28.56
ATOM 116 NE ARG A 17 -0.772 25.134 53.510 1.00 51.45
ATOM 117 CZ ARG A 17 -1.392 24.225 54.263 1.00 69.75
ATOM 118 NH1 ARG A 17 -2.693 24.086 54.287 1.00 72.82
ATOM 119 NH2 ARG A 17 -0.694 23.418 55.032 1.00 48.88
ATOM 120 N THR A 18 -2.723 31.532 51.700 1.00 21.89
ATOM 121 CA THR A 18 -2.478 32.539 50.713 1.00 20.46
ATOM 122 C THR A 18 -1.200 32.197 50.007 1.00 27.00
ATOM 123 O THR A 18 -0.207 31.923 50.662 1.00 26.28
ATOM 124 CB THR A 18 -2.370 33.949 51.337 1.00 21.64
ATOM 125 OG1 THR A 18 -3.539 34.262 52.076 1.00 25.03
ATOM 126 CG2 THR A 18 -2.164 34.944 50.211 1.00 21.73
ATOM 127 N LYS A 19 -1.235 32.203 48.677 1.00 22.54
ATOM 128 CA LYS A 19 -0.091 31.871 47.864 1.00 21.16
ATOM 129 C LYS A 19 0.538 33.063 47.238 1.00 23.51
ATOM 130 O LYS A 19 1.732 33.098 46.968 1.00 23.00
ATOM 131 CB LYS A 19 -0.557 30.976 46.740 1.00 24.60
ATOM 132 CG LYS A 19 -1.311 29.775 47.257 1.00 34.24
ATOM 133 CD LYS A 19 -0.944 29.419 48.688 1.00 65.32
ATOM 134 CE LYS A 19 0.230 28.442 48.793 1.00 75.40
ATOM 135 NZ LYS A 19 1.183 28.796 49.864 1.00 66.99
ATOM 136 N HIS A 20 -0.280 34.053 46.967 1.00 22.30
ATOM 137 CA HIS A 20 0.201 35.250 46.309 1.00 20.94
ATOM 138 C HIS A 20 -0.588 36.484 46.673 1.00 23.90
ATOM 139 O HIS A 20 -1.779 36.414 47.022 1.00 23.31
ATOM 140 CB HIS A 20 0.054 35.095 44.801 1.00 19.15
ATOM 141 CG HIS A 20 0.888 36.085 44.129 1.00 20.96
ATOM 142 ND1 HIS A 20 2.258 36.003 44.163 1.00 22.60
ATOM 143 CD2 HIS A 20 0.538 37.198 43.437 1.00 24.10
ATOM 144 CE1 HIS A 20 2.725 37.040 43.496 1.00 23.71
ATOM 145 NE2 HIS A 20 1.708 37.784 43.025 1.00 24.51
ATOM 146 N LEU A 21 0.105 37.600 46.594 1.00 26.18
ATOM 147 CA LEU A 21 -0.484 38.893 46.871 1.00 27.24
ATOM 148 C LEU A 21 -0.104 39.856 45.805 1.00 27.01
ATOM 149 O LEU A 21 1.076 40.014 45.522 1.00 27.97
ATOM 150 CB LEU A 21 -0.064 39.501 48.215 1.00 28.80
ATOM 151 CG LEU A 21 -0.335 41.006 48.296 1.00 34.13
ATOM 152 CD1 LEU A 21 -1.834 41.309 48.440 1.00 36.26
ATOM 153 CD2 LEU A 21 0.393 41.578 49.504 1.00 36.24
ATOM 154 N HIS A 22 -1.110 40.475 45.203 1.00 28.25
ATOM 155 CA HIS A 22 -0.852 41.482 44.186 1.00 30.03
ATOM 156 C HIS A 22 -1.272 42.800 44.795 1.00 31.36
ATOM 157 O HIS A 22 -2.435 42.993 45.127 1.00 30.57
ATOM 158 CB HIS A 22 -1.560 41.291 42.844 1.00 31.66
ATOM 159 CG HIS A 22 -1.060 42.347 41.913 1.00 34.36
ATOM 160 ND1 HIS A 22 -1.913 43.134 41.187 1.00 37.39
ATOM 161 CD2 HIS A 22 0.208 42.734 41.635 1.00 37.45
ATOM 162 CE1 HIS A 22 -1.155 43.968 40.481 1.00 38.02
ATOM 163 NE2 HIS A 22 0.132 43.757 40.730 1.00 37.95
ATOM 164 N LEU A 23 -0.315 43.668 45.000 1.00 31.07
ATOM 165 CA LEU A 23 -0.593 44.939 45.637 1.00 31.63
ATOM 166 C LEU A 23 -0.469 46.144 44.705 1.00 32.72
ATOM 167 O LEU A 23 0.563 46.431 44.093 1.00 34.74
ATOM 168 CB LEU A 23 0.299 45.093 46.894 1.00 31.20

ATOM 169 CG LEU A 23 -0.320 45.795 48.126 1.00 34.26
ATOM 170 CD1 LEU A 23 0.543 46.966 48.510 1.00 32.64
ATOM 171 CD2 LEU A 23 -1.759 46.263 47.957 1.00 34.32
ATOM 172 N ARG A 24 -1.576 46.840 44.623 1.00 28.33
ATOM 173 CA ARG A 24 -1.681 48.040 43.837 1.00 30.28
ATOM 174 C ARG A 24 -2.162 49.119 44.794 1.00 35.16
ATOM 175 O ARG A 24 -3.251 49.005 45.349 1.00 35.74
ATOM 176 CB ARG A 24 -2.651 47.860 42.689 1.00 32.69
ATOM 177 CG ARG A 24 -1.962 47.363 41.423 1.00 55.58
ATOM 178 CD ARG A 24 -2.732 47.698 40.144 1.00 67.44
ATOM 179 NE ARG A 24 -3.993 46.971 40.030 1.00 64.57
ATOM 180 CZ ARG A 24 -5.150 47.440 40.498 1.00 97.41
ATOM 181 NH1 ARG A 24 -5.246 48.624 41.108 1.00 81.55
ATOM 182 NH2 ARG A 24 -6.249 46.713 40.344 1.00100.00
ATOM 183 N CYS A 25 -1.320 50.126 45.045 1.00 36.40
ATOM 184 CA CYS A 25 -1.696 51.181 45.998 1.00 36.70
ATOM 185 C CYS A 25 -0.996 52.522 45.815 1.00 34.57
ATOM 186 O CYS A 25 0.030 52.676 45.100 1.00 30.46
ATOM 187 CB CYS A 25 -1.599 50.732 47.481 1.00 37.45
ATOM 188 SG CYS A 25 0.119 50.641 48.047 1.00 41.07
ATOM 189 N SER A 26 -1.606 53.493 46.507 1.00 32.19
ATOM 190 CA SER A 26 -1.098 54.841 46.486 1.00 32.91
ATOM 191 C SER A 26 -0.861 55.372 47.877 1.00 28.73
ATOM 192 O SER A 26 -1.638 55.107 48.802 1.00 24.93
ATOM 193 CB SER A 26 -1.884 55.825 45.626 1.00 41.21
ATOM 194 OG SER A 26 -0.987 56.748 45.012 1.00 55.61
ATOM 195 N VAL A 27 0.258 56.092 47.964 1.00 28.06
ATOM 196 CA VAL A 27 0.719 56.718 49.172 1.00 29.85
ATOM 197 C VAL A 27 0.330 58.199 49.211 1.00 33.50
ATOM 198 O VAL A 27 0.868 59.024 48.443 1.00 31.85
ATOM 199 CB VAL A 27 2.217 56.509 49.370 1.00 34.37
ATOM 200 CG1 VAL A 27 2.605 57.003 50.774 1.00 35.81
ATOM 201 CG2 VAL A 27 2.481 55.004 49.263 1.00 33.03
ATOM 202 N ASP A 28 -0.626 58.489 50.106 1.00 31.46
ATOM 203 CA ASP A 28 -1.137 59.841 50.327 1.00 32.29
ATOM 204 C ASP A 28 -0.700 60.403 51.687 1.00 27.74
ATOM 205 O ASP A 28 -1.254 60.057 52.728 1.00 25.85
ATOM 206 CB ASP A 28 -2.663 59.943 50.144 1.00 35.45
ATOM 207 CG ASP A 28 -3.158 61.380 50.016 1.00 43.54
ATOM 208 OD1 ASP A 28 -2.559 62.348 50.463 1.00 39.89
ATOM 209 OD2 ASP A 28 -4.290 61.467 49.353 1.00 50.90
ATOM 210 N PHE A 29 0.311 61.251 51.614 1.00 29.04
ATOM 211 CA PHE A 29 0.913 61.918 52.741 1.00 32.69
ATOM 212 C PHE A 29 0.011 63.004 53.317 1.00 46.23
ATOM 213 O PHE A 29 0.021 63.341 54.511 1.00 49.95
ATOM 214 CB PHE A 29 2.199 62.568 52.288 1.00 34.84
ATOM 215 CG PHE A 29 3.371 61.627 52.322 1.00 37.91
ATOM 216 CD1 PHE A 29 3.961 61.270 53.534 1.00 39.04
ATOM 217 CD2 PHE A 29 3.893 61.111 51.136 1.00 39.45
ATOM 218 CE1 PHE A 29 5.064 60.419 53.565 1.00 39.96
ATOM 219 CE2 PHE A 29 4.992 60.254 51.153 1.00 43.33
ATOM 220 CZ PHE A 29 5.573 59.908 52.373 1.00 39.81
ATOM 221 N THR A 30 -0.788 63.569 52.445 1.00 43.44
ATOM 222 CA THR A 30 -1.695 64.590 52.870 1.00 40.68
ATOM 223 C THR A 30 -2.776 63.990 53.751 1.00 36.25
ATOM 224 O THR A 30 -3.160 64.575 54.741 1.00 37.59
ATOM 225 CB THR A 30 -2.241 65.353 51.661 1.00 44.14
ATOM 226 OG1 THR A 30 -1.312 66.379 51.280 1.00 35.00

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ATOM 227 CG2 THR A 30 -3.634 65.886 51.979 1.00 42.00
ATOM 228 N ARG A 31 -3.249 62.803 53.426 1.00 23.27
ATOM 229 CA ARG A 31 -4.258 62.179 54.263 1.00 22.52
ATOM 230 C ARG A 31 -3.670 61.084 55.187 1.00 28.33
ATOM 231 O ARG A 31 -4.388 60.485 56.013 1.00 26.36
ATOM 232 CB ARG A 31 -5.360 61.545 53.423 1.00 29.16
ATOM 233 CG ARG A 31 -6.236 62.579 52.723 1.00 52.89
ATOM 234 CD ARG A 31 -6.324 62.368 51.215 1.00 63.14
ATOM 235 NE ARG A 31 -5.912 63.537 50.434 1.00 56.84
ATOM 236 CZ ARG A 31 -6.777 64.353 49.868 1.00 58.33
ATOM 237 NH1 ARG A 31 -8.084 64.154 49.996 1.00 45.96
ATOM 238 NH2 ARG A 31 -6.335 65.393 49.166 1.00 57.96
ATOM 239 N ARG A 32 -2.353 60.838 55.018 1.00 28.39
ATOM 240 CA ARG A 32 -1.587 59.832 55.754 1.00 28.42
ATOM 241 C ARG A 32 -2.248 58.498 55.548 1.00 31.13
ATOM 242 O ARG A 32 -2.553 57.754 56.484 1.00 26.52
ATOM 243 CB ARG A 32 -1.353 60.163 57.233 1.00 22.96
ATOM 244 CG ARG A 32 -1.083 61.654 57.442 1.00 46.47
ATOM 245 CD ARG A 32 0.247 62.022 58.108 1.00 65.92
ATOM 246 NE ARG A 32 0.307 61.670 59.532 1.00 62.95
ATOM 247 CZ ARG A 32 1.244 62.060 60.403 1.00 56.24
ATOM 248 NH1 ARG A 32 2.259 62.862 60.090 1.00 38.45
ATOM 249 NH2 ARG A 32 1.150 61.628 61.644 1.00 38.26
ATOM 250 N THR A 33 -2.503 58.222 54.278 1.00 30.15
ATOM 251 CA THR A 33 -3.148 56.969 53.940 1.00 30.69
ATOM 252 C THR A 33 -2.460 56.247 52.816 1.00 30.70
ATOM 253 O THR A 33 -1.765 56.842 51.978 1.00 27.23
ATOM 254 CB THR A 33 -4.603 57.146 53.467 1.00 39.23
ATOM 255 OG1 THR A 33 -4.637 58.100 52.420 1.00 37.97
ATOM 256 CG2 THR A 33 -5.567 57.481 54.598 1.00 34.16
ATOM 257 N LEU A 34 -2.719 54.950 52.842 1.00 30.87
ATOM 258 CA LEU A 34 -2.279 54.012 51.842 1.00 32.01
ATOM 259 C LEU A 34 -3.598 53.483 51.332 1.00 26.54
ATOM 260 O LEU A 34 -4.426 53.031 52.106 1.00 25.08
ATOM 261 CB LEU A 34 -1.518 52.805 52.428 1.00 35.05
ATOM 262 CG LEU A 34 -0.007 52.880 52.357 1.00 42.66
ATOM 263 CD1 LEU A 34 0.537 51.446 52.425 1.00 41.75
ATOM 264 CD2 LEU A 34 0.434 53.610 51.081 1.00 49.07
ATOM 265 N THR A 35 -3.828 53.576 50.050 1.00 27.44
ATOM 266 CA THR A 35 -5.088 53.081 49.552 1.00 29.43
ATOM 267 C THR A 35 -4.825 52.257 48.316 1.00 33.69
ATOM 268 O THR A 35 -3.896 52.559 47.532 1.00 31.06
ATOM 269 CB THR A 35 -6.004 54.248 49.195 1.00 49.67
ATOM 270 OG1 THR A 35 -5.775 55.297 50.111 1.00 56.12
ATOM 271 CG2 THR A 35 -7.442 53.781 49.282 1.00 53.32
ATOM 272 N GLY A 36 -5.638 51.220 48.172 1.00 31.25
ATOM 273 CA GLY A 36 -5.509 50.336 47.024 1.00 30.78
ATOM 274 C GLY A 36 -6.314 49.072 47.144 1.00 27.36
ATOM 275 O GLY A 36 -7.358 48.969 47.773 1.00 26.53
ATOM 276 N THR A 37 -5.809 48.080 46.504 1.00 27.32
ATOM 277 CA THR A 37 -6.478 46.793 46.579 1.00 29.08
ATOM 278 C THR A 37 -5.460 45.717 46.846 1.00 29.62
ATOM 279 O THR A 37 -4.321 45.787 46.370 1.00 27.85
ATOM 280 CB THR A 37 -7.268 46.425 45.311 1.00 35.94
ATOM 281 OG1 THR A 37 -6.546 46.790 44.142 1.00 33.45
ATOM 282 CG2 THR A 37 -8.601 47.144 45.350 1.00 41.23
ATOM 283 N ALA A 38 -5.867 44.738 47.609 1.00 28.10
ATOM 284 CA ALA A 38 -4.934 43.674 47.856 1.00 27.55

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ATOM    286  O   ALA A  38      -6.536  41.941  47.510  1.00 31.51
ATOM    287  CB  ALA A  38      -4.803  43.425  49.339  1.00 26.00
ATOM    288  N   ALA A  39      -4.798  41.981  46.090  1.00 27.63
ATOM    289  CA  ALA A  39      -5.280  40.761  45.394  1.00 29.40
ATOM    290  C   ALA A  39      -4.563  39.541  45.966  1.00 29.05
ATOM    291  O   ALA A  39      -3.371  39.333  45.734  1.00 28.04
ATOM    292  CB  ALA A  39      -5.024  40.787  43.888  1.00 30.14
ATOM    293  N   LEU A  40      -5.327  38.780  46.713  1.00 26.03
ATOM    294  CA  LEU A  40      -4.899  37.591  47.392  1.00 26.04
ATOM    295  C   LEU A  40      -5.304  36.310  46.637  1.00 30.62
ATOM    296  O   LEU A  40      -6.499  36.038  46.394  1.00 28.36
ATOM    297  CB  LEU A  40      -5.596  37.499  48.779  1.00 24.92
ATOM    298  CG  LEU A  40      -5.312  38.663  49.725  1.00 27.54
ATOM    299  CD1 LEU A  40      -5.870  38.272  51.074  1.00 29.18
ATOM    300  CD2 LEU A  40      -3.817  38.865  49.857  1.00 26.20
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ATOM    302  CA  THR A  41      -4.566  34.232  45.700  1.00 23.84
ATOM    303  C   THR A  41      -4.509  33.259  46.841  1.00 28.24
ATOM    304  O   THR A  41      -3.448  33.076  47.421  1.00 28.49
ATOM    305  CB  THR A  41      -3.554  33.854  44.613  1.00 38.89
ATOM    306  OG1 THR A  41      -3.594  34.801  43.555  1.00 32.11
ATOM    307  CG2 THR A  41      -3.856  32.426  44.113  1.00 33.97
ATOM    308  N   VAL A  42      -5.674  32.704  47.169  1.00 25.76
ATOM    309  CA  VAL A  42      -5.843  31.782  48.261  1.00 26.45
ATOM    310  C   VAL A  42      -6.068  30.356  47.804  1.00 34.04
ATOM    311  O   VAL A  42      -6.730  30.118  46.795  1.00 33.15
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ATOM    314  CG2 VAL A  42      -6.805  33.657  49.611  1.00 28.98
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ATOM    316  CA  GLN A  43      -5.692  27.989  48.247  1.00 28.15
ATOM    317  C   GLN A  43      -6.357  27.171  49.356  1.00 31.60
ATOM    318  O   GLN A  43      -5.916  27.081  50.506  1.00 30.09
ATOM    319  CB  GLN A  43      -4.401  27.337  47.748  1.00 29.76
ATOM    320  CG  GLN A  43      -4.305  25.877  48.214  1.00 49.25
ATOM    321  CD  GLN A  43      -2.920  25.308  48.018  1.00 68.40
ATOM    322  OE1 GLN A  43      -2.508  25.059  46.882  1.00 65.93
ATOM    323  NE2 GLN A  43      -2.190  25.118  49.116  1.00 62.52
ATOM    324  N   SER A  44      -7.470  26.553  49.027  1.00 25.74
ATOM    325  CA  SER A  44      -8.159  25.793  50.027  1.00 24.21
ATOM    326  C   SER A  44      -7.406  24.562  50.434  1.00 31.27
ATOM    327  O   SER A  44      -6.701  23.950  49.642  1.00 33.21
ATOM    328  CB  SER A  44      -9.542  25.400  49.574  1.00 28.22
ATOM    329  OG  SER A  44     -10.143  24.569  50.550  1.00 36.23
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ATOM    331  CA  GLN A  45      -6.964  23.016  52.240  1.00 32.48
ATOM    332  C   GLN A  45      -8.027  22.007  52.618  1.00 41.18
ATOM    333  O   GLN A  45      -7.757  20.936  53.165  1.00 37.68
ATOM    334  CB  GLN A  45      -6.095  23.387  53.451  1.00 35.17
ATOM    335  CG  GLN A  45      -5.138  24.525  53.090  1.00 29.17
ATOM    336  CD  GLN A  45      -4.197  24.179  51.954  1.00 37.50
ATOM    337  OE1 GLN A  45      -4.107  24.903  50.939  1.00 44.48
ATOM    338  NE2 GLN A  45      -3.466  23.083  52.127  1.00 23.35
ATOM    339  N   GLU A  46      -9.258  22.387  52.322  1.00 40.69
ATOM    340  CA  GLU A  46     -10.391  21.548  52.591  1.00 41.85
ATOM    341  C   GLU A  46     -11.311  21.472  51.388  1.00 46.94
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ATOM 344 CG GLU A 46 -10.736 23.256 54.548 1.00 48.14
ATOM 345 CD GLU A 46 -11.469 23.463 55.856 1.00 62.06
ATOM 346 OE1 GLU A 46 -12.507 24.103 55.957 1.00 64.38
ATOM 347 OE2 GLU A 46 -10.880 22.875 56.871 1.00 51.57
ATOM 348 N ASP A 47 -12.306 20.638 51.523 1.00 46.70
ATOM 349 CA ASP A 47 -13.261 20.543 50.464 1.00 48.51
ATOM 350 C ASP A 47 -14.408 21.358 50.947 1.00 45.90
ATOM 351 O ASP A 47 -14.674 21.368 52.148 1.00 41.55
ATOM 352 CB ASP A 47 -13.748 19.104 50.220 1.00 52.32
ATOM 353 CG ASP A 47 -12.739 18.258 49.495 1.00 80.62
ATOM 354 OD1 ASP A 47 -12.338 18.505 48.364 1.00 77.22
ATOM 355 OD2 ASP A 47 -12.330 17.237 50.218 1.00100.00
ATOM 356 N ASN A 48 -15.067 22.044 50.045 1.00 44.45
ATOM 357 CA ASN A 48 -16.209 22.826 50.475 1.00 45.83
ATOM 358 C ASN A 48 -15.875 24.055 51.308 1.00 46.95
ATOM 359 O ASN A 48 -16.620 24.449 52.219 1.00 45.85
ATOM 360 CB ASN A 48 -17.246 21.959 51.225 1.00 43.60
ATOM 361 CG ASN A 48 -18.653 22.469 51.004 1.00 65.69
ATOM 362 OD1 ASN A 48 -18.924 23.191 50.027 1.00 68.02
ATOM 363 ND2 ASN A 48 -19.545 22.123 51.922 1.00 53.94
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ATOM 365 CA LEU A 49 -14.445 25.850 51.741 1.00 35.92
ATOM 366 C LEU A 49 -15.377 26.909 51.178 1.00 39.46
ATOM 367 O LEU A 49 -15.301 27.241 49.998 1.00 36.67
ATOM 368 CB LEU A 49 -12.977 26.218 51.556 1.00 34.20
ATOM 369 CG LEU A 49 -12.623 27.492 52.307 1.00 36.68
ATOM 370 CD1 LEU A 49 -13.000 27.286 53.753 1.00 35.00
ATOM 371 CD2 LEU A 49 -11.135 27.785 52.181 1.00 38.84
ATOM 372 N ARG A 50 -16.287 27.411 51.998 1.00 40.21
ATOM 373 CA ARG A 50 -17.242 28.417 51.525 1.00 41.40
ATOM 374 C ARG A 50 -16.907 29.859 51.901 1.00 47.29
ATOM 375 O ARG A 50 -17.364 30.801 51.263 1.00 47.10
ATOM 376 CB ARG A 50 -18.644 28.046 51.980 1.00 38.23
ATOM 377 CG ARG A 50 -18.911 26.547 51.811 1.00 52.44
ATOM 378 CD ARG A 50 -20.385 26.171 51.839 1.00 58.37
ATOM 379 NE ARG A 50 -20.835 25.461 50.643 1.00 80.87
ATOM 380 CZ ARG A 50 -21.951 24.727 50.592 1.00100.00
ATOM 381 NH1 ARG A 50 -22.750 24.575 51.652 1.00100.00
ATOM 382 NH2 ARG A 50 -22.272 24.127 49.446 1.00 65.83
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ATOM 384 CA SER A 51 -15.714 31.334 53.418 1.00 41.14
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ATOM 386 O SER A 51 -14.253 30.319 55.016 1.00 46.38
ATOM 387 CB SER A 51 -16.821 31.863 54.321 1.00 45.40
ATOM 388 OG SER A 51 -16.862 31.143 55.556 1.00 46.27
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ATOM 393 CB LEU A 52 -11.103 32.143 54.203 1.00 35.84
ATOM 394 CG LEU A 52 -10.729 33.115 53.095 1.00 39.41
ATOM 395 CD1 LEU A 52 -11.745 33.042 51.994 1.00 41.33
ATOM 396 CD2 LEU A 52 -10.624 34.538 53.605 1.00 38.19
ATOM 397 N VAL A 53 -11.491 33.659 56.859 1.00 37.98
ATOM 398 CA VAL A 53 -11.331 34.834 57.737 1.00 34.43
ATOM 399 C VAL A 53 -9.933 35.384 57.550 1.00 31.66
ATOM 400 O VAL A 53 -8.975 34.606 57.511 1.00 28.02

ATOM 401 CB VAL A 53 -11.601 34.597 59.226 1.00 37.95
ATOM 402 CG1 VAL A 53 -11.580 35.929 59.989 1.00 37.38
ATOM 403 CG2 VAL A 53 -12.946 33.922 59.419 1.00 37.84
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ATOM 405 CA LEU A 54 -8.558 37.365 57.270 1.00 22.89
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ATOM 407 O LEU A 54 -9.388 38.613 59.138 1.00 25.65
ATOM 408 CB LEU A 54 -8.515 38.242 56.019 1.00 23.57
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ATOM 427 N LYS A 57 -6.598 45.405 60.918 1.00 20.41
ATOM 428 CA LYS A 57 -6.478 46.239 62.114 1.00 19.63
ATOM 429 C LYS A 57 -6.656 47.686 61.717 1.00 21.21
ATOM 430 O LYS A 57 -5.851 48.222 60.995 1.00 19.18
ATOM 431 CB LYS A 57 -5.182 45.983 62.827 1.00 21.05
ATOM 432 CG LYS A 57 -5.137 46.424 64.271 1.00 26.38
ATOM 433 CD LYS A 57 -3.713 46.855 64.626 1.00 44.32
ATOM 434 CE LYS A 57 -3.331 46.750 66.099 1.00 61.77
ATOM 435 NZ LYS A 57 -1.996 47.313 66.396 1.00 53.68
ATOM 436 N ASP A 58 -7.739 48.322 62.162 1.00 23.32
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ATOM 440 CB ASP A 58 -6.971 50.657 62.459 1.00 24.48
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ATOM 445 CA LEU A 59 -8.545 49.049 58.177 1.00 26.97
ATOM 446 C LEU A 59 -9.946 49.473 57.707 1.00 30.09
ATOM 447 O LEU A 59 -10.971 49.074 58.245 1.00 28.07
ATOM 448 CB LEU A 59 -8.132 47.698 57.479 1.00 26.65
ATOM 449 CG LEU A 59 -6.639 47.356 57.443 1.00 24.34
ATOM 450 CD1 LEU A 59 -6.445 46.049 56.687 1.00 25.03
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ATOM 455 O THR A 60 -10.634 49.978 53.813 1.00 29.18
ATOM 456 CB THR A 60 -11.282 52.198 55.881 1.00 38.77
ATOM 457 OG1 THR A 60 -11.898 52.759 57.020 1.00 55.62
ATOM 458 CG2 THR A 60 -12.086 52.528 54.635 1.00 42.40

ATOM 459 N ILE A 61 -12.465 49.042 54.808 1.00 30.99
ATOM 460 CA ILE A 61 -12.758 48.181 53.667 1.00 33.20
ATOM 461 C ILE A 61 -13.821 48.708 52.741 1.00 38.63
ATOM 462 O ILE A 61 -14.987 48.694 53.102 1.00 34.56
ATOM 463 CB ILE A 61 -13.230 46.809 54.087 1.00 37.17
ATOM 464 CG1 ILE A 61 -12.407 46.229 55.252 1.00 37.33
ATOM 465 CG2 ILE A 61 -13.229 45.905 52.850 1.00 39.90
ATOM 466 CD1 ILE A 61 -10.929 46.003 54.937 1.00 41.79
ATOM 467 N GLU A 62 -13.407 49.117 51.548 1.00 42.13
ATOM 468 CA GLU A 62 -14.330 49.624 50.543 1.00 45.12
ATOM 469 C GLU A 62 -15.208 48.498 49.976 1.00 48.64
ATOM 470 O GLU A 62 -16.442 48.537 49.984 1.00 49.46
ATOM 471 CB GLU A 62 -13.550 50.305 49.397 1.00 47.88
ATOM 472 CG GLU A 62 -14.390 51.345 48.620 1.00 73.90
ATOM 473 CD GLU A 62 -15.062 50.839 47.363 1.00100.00
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ATOM 478 C LYS A 63 -14.377 45.153 48.678 1.00 34.27
ATOM 479 O LYS A 63 -13.167 45.306 48.512 1.00 29.28
ATOM 480 CB LYS A 63 -15.891 46.760 47.601 1.00 32.16
ATOM 481 CG LYS A 63 -14.816 47.067 46.573 1.00 22.38
ATOM 482 CD LYS A 63 -15.373 47.148 45.162 1.00 32.02
ATOM 483 CE LYS A 63 -14.778 48.257 44.308 1.00 33.99
ATOM 484 NZ LYS A 63 -13.723 47.814 43.365 1.00 52.00
ATOM 485 N VAL A 64 -15.001 43.985 48.614 1.00 36.16
ATOM 486 CA VAL A 64 -14.292 42.751 48.306 1.00 39.33
ATOM 487 C VAL A 64 -14.792 42.157 46.993 1.00 43.15
ATOM 488 O VAL A 64 -15.971 41.822 46.859 1.00 38.90
ATOM 489 CB VAL A 64 -14.401 41.692 49.370 1.00 42.66
ATOM 490 CG1 VAL A 64 -13.465 40.566 48.928 1.00 42.11
ATOM 491 CG2 VAL A 64 -14.028 42.276 50.730 1.00 40.96
ATOM 492 N VAL A 65 -13.892 42.023 46.036 1.00 40.44
ATOM 493 CA VAL A 65 -14.287 41.505 44.739 1.00 37.94
ATOM 494 C VAL A 65 -13.708 40.162 44.350 1.00 35.48
ATOM 495 O VAL A 65 -12.511 39.915 44.474 1.00 31.12
ATOM 496 CB VAL A 65 -14.047 42.540 43.647 1.00 39.44
ATOM 497 CG1 VAL A 65 -14.238 41.899 42.287 1.00 38.78
ATOM 498 CG2 VAL A 65 -15.024 43.692 43.844 1.00 38.69
ATOM 499 N ILE A 66 -14.599 39.316 43.847 1.00 32.12
ATOM 500 CA ILE A 66 -14.223 38.010 43.372 1.00 31.54
ATOM 501 C ILE A 66 -14.825 37.784 41.993 1.00 37.42
ATOM 502 O ILE A 66 -16.033 37.896 41.794 1.00 34.45
ATOM 503 CB ILE A 66 -14.602 36.884 44.313 1.00 32.82
ATOM 504 CG1 ILE A 66 -13.945 37.071 45.664 1.00 30.69
ATOM 505 CG2 ILE A 66 -14.117 35.581 43.703 1.00 32.94
ATOM 506 CD1 ILE A 66 -14.478 36.125 46.731 1.00 25.31
ATOM 507 N ASN A 67 -13.968 37.498 41.027 1.00 38.89
ATOM 508 CA ASN A 67 -14.426 37.278 39.668 1.00 39.33
ATOM 509 C ASN A 67 -15.373 38.366 39.223 1.00 42.51
ATOM 510 O ASN A 67 -16.525 38.092 38.906 1.00 39.37
ATOM 511 CB ASN A 67 -15.095 35.904 39.501 1.00 35.20
ATOM 512 CG ASN A 67 -14.141 34.765 39.862 1.00 61.24
ATOM 513 OD1 ASN A 67 -12.900 34.842 39.669 1.00 47.44
ATOM 514 ND2 ASN A 67 -14.717 33.706 40.421 1.00 42.22
ATOM 515 N GLY A 68 -14.848 39.590 39.237 1.00 39.48
ATOM 516 CA GLY A 68 -15.527 40.809 38.826 1.00 37.68

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ATOM    517  C   GLY A  68     -16.763  41.167  39.612  1.00 39.81
ATOM    518  O   GLY A  68     -17.380  42.197  39.398  1.00 43.86
ATOM    519  N   GLN A  69     -17.173  40.333  40.513  1.00 33.09
ATOM    520  CA  GLN A  69     -18.351  40.732  41.230  1.00 34.40
ATOM    521  C   GLN A  69     -17.958  41.090  42.626  1.00 47.27
ATOM    522  O   GLN A  69     -16.841  40.790  43.059  1.00 49.22
ATOM    523  CB  GLN A  69     -19.416  39.624  41.285  1.00 36.28
ATOM    524  CG  GLN A  69     -19.908  39.174  39.893  1.00 42.32
ATOM    525  CD  GLN A  69     -20.467  40.321  39.111  1.00 54.27
ATOM    526  OE1 GLN A  69     -19.968  40.635  38.025  1.00 50.67
ATOM    527  NE2 GLN A  69     -21.462  40.989  39.696  1.00 59.09
ATOM    528  N   GLU A  70     -18.898  41.715  43.318  1.00 45.54
ATOM    529  CA  GLU A  70     -18.697  42.105  44.682  1.00 43.70
ATOM    530  C   GLU A  70     -19.236  40.986  45.548  1.00 50.02
ATOM    531  O   GLU A  70     -20.200  40.332  45.162  1.00 55.78
ATOM    532  CB  GLU A  70     -19.351  43.459  44.985  1.00 43.37
ATOM    533  CG  GLU A  70     -18.528  44.659  44.476  1.00 45.21
ATOM    534  CD  GLU A  70     -19.093  45.975  44.964  1.00 80.18
ATOM    535  OE1 GLU A  70     -19.937  46.064  45.861  1.00 51.66
ATOM    536  OE2 GLU A  70     -18.594  47.005  44.319  1.00 79.05
ATOM    537  N   VAL A  71     -18.611  40.735  46.695  1.00 37.89
ATOM    538  CA  VAL A  71     -19.067  39.666  47.551  1.00 33.11
ATOM    539  C   VAL A  71     -19.420  40.129  48.963  1.00 35.14
ATOM    540  O   VAL A  71     -19.165  41.257  49.380  1.00 36.32
ATOM    541  CB  VAL A  71     -18.147  38.422  47.497  1.00 33.37
ATOM    542  CG1 VAL A  71     -17.772  38.119  46.050  1.00 31.13
ATOM    543  CG2 VAL A  71     -16.866  38.594  48.326  1.00 31.47
ATOM    544  N   LYS A  72     -20.016  39.247  49.696  1.00 31.08
ATOM    545  CA  LYS A  72     -20.385  39.549  51.037  1.00 34.55
ATOM    546  C   LYS A  72     -19.155  39.360  51.922  1.00 46.45
ATOM    547  O   LYS A  72     -18.344  38.455  51.678  1.00 44.93
ATOM    548  CB  LYS A  72     -21.484  38.586  51.447  1.00 37.84
ATOM    549  CG  LYS A  72     -22.553  39.153  52.362  1.00 60.35
ATOM    550  CD  LYS A  72     -22.630  38.370  53.660  1.00 78.18
ATOM    551  CE  LYS A  72     -21.389  38.589  54.500  1.00 92.99
ATOM    552  NZ  LYS A  72     -20.860  39.935  54.295  1.00100.00
ATOM    553  N   TYR A  73     -19.051  40.242  52.930  1.00 45.41
ATOM    554  CA  TYR A  73     -18.006  40.276  53.941  1.00 45.13
ATOM    555  C   TYR A  73     -18.474  41.017  55.167  1.00 47.06
ATOM    556  O   TYR A  73     -19.231  41.979  55.089  1.00 45.05
ATOM    557  CB  TYR A  73     -16.720  40.932  53.488  1.00 44.74
ATOM    558  CG  TYR A  73     -16.753  42.438  53.504  1.00 47.77
ATOM    559  CD1 TYR A  73     -16.507  43.169  54.674  1.00 50.00
ATOM    560  CD2 TYR A  73     -17.005  43.133  52.306  1.00 49.34
ATOM    561  CE1 TYR A  73     -16.519  44.565  54.662  1.00 52.06
ATOM    562  CE2 TYR A  73     -16.967  44.529  52.284  1.00 50.56
ATOM    563  CZ  TYR A  73     -16.684  45.235  53.452  1.00 60.67
ATOM    564  OH  TYR A  73     -16.859  46.597  53.418  1.00 66.04
ATOM    565  N   ALA A  74     -17.993  40.557  56.289  1.00 40.33
ATOM    566  CA  ALA A  74     -18.323  41.138  57.545  1.00 39.85
ATOM    567  C   ALA A  74     -17.068  41.281  58.412  1.00 47.89
ATOM    568  O   ALA A  74     -16.147  40.464  58.346  1.00 46.81
ATOM    569  CB  ALA A  74     -19.346  40.262  58.237  1.00 39.87
ATOM    570  N   LEU A  75     -17.055  42.339  59.227  1.00 42.79
ATOM    571  CA  LEU A  75     -15.980  42.650  60.148  1.00 38.94
ATOM    572  C   LEU A  75     -16.416  42.342  61.561  1.00 44.65
ATOM    573  O   LEU A  75     -17.388  42.895  62.068  1.00 48.50
ATOM    574  CB  LEU A  75     -15.667  44.141  60.115  1.00 37.30
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ATOM 575 CG LEU A 75 -14.899 44.572 58.899 1.00 44.06
ATOM 576 CD1 LEU A 75 -14.476 46.031 59.085 1.00 47.51
ATOM 577 CD2 LEU A 75 -13.691 43.666 58.677 1.00 46.54
ATOM 578 N GLY A 76 -15.718 41.474 62.242 1.00 39.16
ATOM 579 CA GLY A 76 -16.145 41.228 63.597 1.00 36.77
ATOM 580 C GLY A 76 -15.652 42.360 64.461 1.00 31.43
ATOM 581 O GLY A 76 -14.997 43.290 63.969 1.00 26.07
ATOM 582 N GLU A 77 -15.973 42.281 65.736 1.00 32.78
ATOM 583 CA GLU A 77 -15.539 43.318 66.645 1.00 34.78
ATOM 584 C GLU A 77 -14.050 43.214 66.886 1.00 38.63
ATOM 585 O GLU A 77 -13.431 42.176 66.641 1.00 34.85
ATOM 586 CB GLU A 77 -16.337 43.338 67.966 1.00 37.18
ATOM 587 CG GLU A 77 -16.506 41.956 68.643 1.00 56.65
ATOM 588 CD GLU A 77 -16.316 41.990 70.151 1.00100.00
ATOM 589 OE1 GLU A 77 -16.789 42.859 70.877 1.00100.00
ATOM 590 OE2 GLU A 77 -15.603 40.975 70.597 1.00100.00
ATOM 591 N ARG A 78 -13.483 44.312 67.343 1.00 37.73
ATOM 592 CA ARG A 78 -12.068 44.336 67.624 1.00 37.11
ATOM 593 C ARG A 78 -11.709 43.545 68.889 1.00 39.61
ATOM 594 O ARG A 78 -12.422 43.549 69.906 1.00 36.40
ATOM 595 CB ARG A 78 -11.522 45.744 67.693 1.00 33.62
ATOM 596 CG ARG A 78 -9.991 45.807 67.699 1.00 34.93
ATOM 597 CD ARG A 78 -9.516 47.207 68.040 1.00 32.03
ATOM 598 NE ARG A 78 -8.083 47.397 68.058 1.00 33.71
ATOM 599 CZ ARG A 78 -7.459 48.239 67.241 1.00 53.03
ATOM 600 NH1 ARG A 78 -8.114 48.941 66.314 1.00 39.56
ATOM 601 NH2 ARG A 78 -6.139 48.361 67.337 1.00 53.05
ATOM 602 N GLN A 79 -10.576 42.842 68.795 1.00 33.34
ATOM 603 CA GLN A 79 -10.044 42.052 69.881 1.00 32.25
ATOM 604 C GLN A 79 -8.708 42.662 70.221 1.00 36.49
ATOM 605 O GLN A 79 -7.651 42.164 69.834 1.00 37.41
ATOM 606 CB GLN A 79 -9.906 40.580 69.472 1.00 31.80
ATOM 607 CG GLN A 79 -11.263 39.972 69.092 1.00 31.70
ATOM 608 CD GLN A 79 -11.143 38.511 68.713 1.00 62.24
ATOM 609 OE1 GLN A 79 -10.234 37.819 69.182 1.00 64.13
ATOM 610 NE2 GLN A 79 -12.046 38.033 67.862 1.00 56.77
ATOM 611 N SER A 80 -8.787 43.794 70.893 1.00 30.40
ATOM 612 CA SER A 80 -7.617 44.551 71.284 1.00 27.48
ATOM 613 C SER A 80 -6.535 44.592 70.257 1.00 29.91
ATOM 614 O SER A 80 -6.758 45.054 69.140 1.00 28.75
ATOM 615 CB SER A 80 -7.066 44.252 72.655 1.00 27.52
ATOM 616 OG SER A 80 -7.173 42.874 72.863 1.00 44.76
ATOM 617 N TYR A 81 -5.350 44.133 70.671 1.00 27.38
ATOM 618 CA TYR A 81 -4.162 44.180 69.820 1.00 25.29
ATOM 619 C TYR A 81 -4.196 43.286 68.604 1.00 23.60
ATOM 620 O TYR A 81 -3.389 43.435 67.710 1.00 26.12
ATOM 621 CB TYR A 81 -2.861 43.992 70.632 1.00 23.78
ATOM 622 CG TYR A 81 -2.849 42.621 71.190 1.00 21.01
ATOM 623 CD1 TYR A 81 -3.374 42.361 72.450 1.00 20.45
ATOM 624 CD2 TYR A 81 -2.387 41.569 70.406 1.00 23.13
ATOM 625 CE1 TYR A 81 -3.402 41.064 72.948 1.00 18.45
ATOM 626 CE2 TYR A 81 -2.426 40.263 70.885 1.00 24.91
ATOM 627 CZ TYR A 81 -2.929 40.017 72.162 1.00 26.97
ATOM 628 OH TYR A 81 -2.960 38.731 72.652 1.00 35.08
ATOM 629 N LYS A 82 -5.125 42.370 68.568 1.00 19.77
ATOM 630 CA LYS A 82 -5.225 41.448 67.433 1.00 19.65
ATOM 631 C LYS A 82 -5.948 42.036 66.232 1.00 26.75
ATOM 632 O LYS A 82 -5.821 41.545 65.107 1.00 26.09

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ATOM    633  CB  LYS A  82      -5.929  40.217  67.888  1.00 19.96
ATOM    634  CG  LYS A  82      -5.039  39.427  68.808  1.00 39.72
ATOM    635  CD  LYS A  82      -5.610  38.058  69.103  1.00 45.35
ATOM    636  CE  LYS A  82      -5.868  37.809  70.577  1.00 52.66
ATOM    637  NZ  LYS A  82      -6.016  36.375  70.879  1.00 51.38
ATOM    638  N   GLY A  83      -6.698  43.114  66.482  1.00 25.62
ATOM    639  CA  GLY A  83      -7.465  43.786  65.441  1.00 24.64
ATOM    640  C   GLY A  83      -8.857  43.145  65.324  1.00 26.15
ATOM    641  O   GLY A  83      -9.348  42.515  66.255  1.00 24.12
ATOM    642  N   SER A  84      -9.463  43.273  64.136  1.00 27.22
ATOM    643  CA  SER A  84     -10.806  42.770  63.829  1.00 27.17
ATOM    644  C   SER A  84     -10.815  41.744  62.720  1.00 29.72
ATOM    645  O   SER A  84     -10.237  41.933  61.649  1.00 30.39
ATOM    646  CB  SER A  84     -11.708  43.929  63.377  1.00 31.94
ATOM    647  OG  SER A  84     -11.719  44.976  64.344  1.00 42.05
ATOM    648  N   PRO A  85     -11.513  40.667  62.979  1.00 24.61
ATOM    649  CA  PRO A  85     -11.640  39.590  62.017  1.00 25.06
ATOM    650  C   PRO A  85     -12.480  40.005  60.819  1.00 33.19
ATOM    651  O   PRO A  85     -13.536  40.622  60.995  1.00 31.19
ATOM    652  CB  PRO A  85     -12.404  38.469  62.736  1.00 24.61
ATOM    653  CG  PRO A  85     -12.959  39.049  64.014  1.00 30.62
ATOM    654  CD  PRO A  85     -12.314  40.423  64.199  1.00 26.23
ATOM    655  N   MET A  86     -12.019  39.632  59.623  1.00 28.27
ATOM    656  CA  MET A  86     -12.754  39.924  58.411  1.00 27.27
ATOM    657  C   MET A  86     -13.227  38.650  57.699  1.00 32.93
ATOM    658  O   MET A  86     -12.438  37.997  57.038  1.00 27.77
ATOM    659  CB  MET A  86     -11.930  40.743  57.451  1.00 27.52
ATOM    660  CG  MET A  86     -12.756  41.222  56.274  1.00 30.43
ATOM    661  SD  MET A  86     -11.679  41.978  55.050  1.00 37.30
ATOM    662  CE  MET A  86     -12.815  42.248  53.681  1.00 37.61
ATOM    663  N   GLU A  87     -14.507  38.295  57.832  1.00 34.14
ATOM    664  CA  GLU A  87     -15.060  37.093  57.184  1.00 36.06
ATOM    665  C   GLU A  87     -15.538  37.367  55.766  1.00 39.45
ATOM    666  O   GLU A  87     -16.366  38.250  55.586  1.00 41.63
ATOM    667  CB  GLU A  87     -16.211  36.499  58.003  1.00 37.41
ATOM    668  CG  GLU A  87     -16.540  35.036  57.655  1.00 43.37
ATOM    669  CD  GLU A  87     -17.445  34.371  58.657  1.00 60.02
ATOM    670  OE1 GLU A  87     -18.629  34.637  58.785  1.00 83.59
ATOM    671  OE2 GLU A  87     -16.827  33.467  59.375  1.00 74.01
ATOM    672  N   ILE A  88     -15.000  36.608  54.788  1.00 34.85
ATOM    673  CA  ILE A  88     -15.343  36.698  53.359  1.00 33.18
ATOM    674  C   ILE A  88     -16.170  35.489  52.896  1.00 42.28
ATOM    675  O   ILE A  88     -15.895  34.352  53.254  1.00 43.61
ATOM    676  CB  ILE A  88     -14.122  36.878  52.475  1.00 33.03
ATOM    677  CG1 ILE A  88     -13.251  38.003  53.020  1.00 31.03
ATOM    678  CG2 ILE A  88     -14.525  37.171  51.035  1.00 31.15
ATOM    679  CD1 ILE A  88     -12.088  38.331  52.096  1.00 33.21
ATOM    680  N   SER A  89     -17.222  35.723  52.116  1.00 41.90
ATOM    681  CA  SER A  89     -18.072  34.635  51.633  1.00 40.20
ATOM    682  C   SER A  89     -17.689  34.229  50.234  1.00 43.89
ATOM    683  O   SER A  89     -17.731  35.037  49.296  1.00 40.79
ATOM    684  CB  SER A  89     -19.557  34.959  51.685  1.00 43.23
ATOM    685  OG  SER A  89     -20.042  34.675  52.986  1.00 57.92
ATOM    686  N   LEU A  90     -17.298  32.967  50.099  1.00 41.94
ATOM    687  CA  LEU A  90     -16.945  32.481  48.793  1.00 41.32
ATOM    688  C   LEU A  90     -18.258  32.175  48.106  1.00 41.86
ATOM    689  O   LEU A  90     -19.186  31.608  48.692  1.00 41.35
ATOM    690  CB  LEU A  90     -16.014  31.252  48.856  1.00 41.25
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ATOM	691	CG	LEU	A	90	-14.827	31.484	49.781	1.00	43.31
ATOM	692	CD1	LEU	A	90	-14.050	30.182	50.020	1.00	40.39
ATOM	693	CD2	LEU	A	90	-13.940	32.569	49.162	1.00	40.88
ATOM	694	N	PRO	A	91	-18.337	32.612	46.887	1.00	40.52
ATOM	695	CA	PRO	A	91	-19.516	32.434	46.056	1.00	43.11
ATOM	696	C	PRO	A	91	-19.516	31.058	45.401	1.00	51.36
ATOM	697	O	PRO	A	91	-20.363	30.753	44.576	1.00	52.06
ATOM	698	CB	PRO	A	91	-19.359	33.470	44.942	1.00	43.83
ATOM	699	CG	PRO	A	91	-17.883	33.867	44.915	1.00	48.09
ATOM	700	CD	PRO	A	91	-17.268	33.373	46.217	1.00	41.44
ATOM	701	N	ILE	A	92	-18.516	30.261	45.767	1.00	50.02
ATOM	702	CA	ILE	A	92	-18.325	28.924	45.259	1.00	50.50
ATOM	703	C	ILE	A	92	-17.525	28.128	46.242	1.00	47.69
ATOM	704	O	ILE	A	92	-16.416	28.497	46.564	1.00	46.80
ATOM	705	CB	ILE	A	92	-17.492	28.924	44.001	1.00	55.84
ATOM	706	CG1	ILE	A	92	-18.372	29.135	42.791	1.00	58.16
ATOM	707	CG2	ILE	A	92	-16.776	27.584	43.884	1.00	59.08
ATOM	708	CD1	ILE	A	92	-17.568	29.038	41.493	1.00	83.51
ATOM	709	N	ALA	A	93	-18.047	27.023	46.683	1.00	40.78
ATOM	710	CA	ALA	A	93	-17.280	26.257	47.599	1.00	38.66
ATOM	711	C	ALA	A	93	-16.066	25.735	46.892	1.00	45.36
ATOM	712	O	ALA	A	93	-16.141	25.391	45.720	1.00	47.87
ATOM	713	CB	ALA	A	93	-18.114	25.149	48.205	1.00	38.35
ATOM	714	N	LEU	A	94	-14.956	25.716	47.630	1.00	42.52
ATOM	715	CA	LEU	A	94	-13.652	25.233	47.181	1.00	41.33
ATOM	716	C	LEU	A	94	-13.330	23.900	47.814	1.00	46.96
ATOM	717	O	LEU	A	94	-13.719	23.618	48.948	1.00	45.93
ATOM	718	CB	LEU	A	94	-12.515	26.182	47.571	1.00	39.52
ATOM	719	CG	LEU	A	94	-12.515	27.449	46.748	1.00	44.05
ATOM	720	CD1	LEU	A	94	-11.153	28.133	46.829	1.00	44.88
ATOM	721	CD2	LEU	A	94	-12.843	27.115	45.305	1.00	45.42
ATOM	722	N	SER	A	95	-12.604	23.083	47.074	1.00	44.42
ATOM	723	CA	SER	A	95	-12.221	21.807	47.591	1.00	43.44
ATOM	724	C	SER	A	95	-10.728	21.776	47.719	1.00	36.96
ATOM	725	O	SER	A	95	-10.038	22.639	47.187	1.00	33.14
ATOM	726	CB	SER	A	95	-12.739	20.704	46.696	1.00	51.13
ATOM	727	OG	SER	A	95	-14.083	20.459	47.074	1.00	60.97
ATOM	728	N	LYS	A	96	-10.240	20.779	48.407	1.00	33.03
ATOM	729	CA	LYS	A	96	-8.818	20.694	48.557	1.00	33.15
ATOM	730	C	LYS	A	96	-8.122	21.204	47.321	1.00	37.16
ATOM	731	O	LYS	A	96	-8.514	20.922	46.188	1.00	38.12
ATOM	732	CB	LYS	A	96	-8.348	19.290	48.861	1.00	34.42
ATOM	733	CG	LYS	A	96	-8.583	18.910	50.298	1.00	57.96
ATOM	734	CD	LYS	A	96	-8.422	17.423	50.553	1.00	73.54
ATOM	735	CE	LYS	A	96	-9.475	16.882	51.512	1.00	94.46
ATOM	736	NZ	LYS	A	96	-9.837	15.475	51.246	1.00	100.00
ATOM	737	N	ASN	A	97	-7.069	21.958	47.573	1.00	29.05
ATOM	738	CA	ASN	A	97	-6.213	22.528	46.568	1.00	25.85
ATOM	739	C	ASN	A	97	-6.783	23.479	45.576	1.00	31.84
ATOM	740	O	ASN	A	97	-6.064	23.909	44.682	1.00	33.02
ATOM	741	CB	ASN	A	97	-5.166	21.572	46.006	1.00	33.23
ATOM	742	CG	ASN	A	97	-4.289	21.018	47.135	1.00	55.19
ATOM	743	OD1	ASN	A	97	-4.009	19.823	47.186	1.00	56.15
ATOM	744	ND2	ASN	A	97	-3.873	21.867	48.073	1.00	43.36
ATOM	745	N	GLN	A	98	-8.053	23.835	45.730	1.00	32.99
ATOM	746	CA	GLN	A	98	-8.611	24.798	44.792	1.00	35.56
ATOM	747	C	GLN	A	98	-8.259	26.220	45.204	1.00	40.34
ATOM	748	O	GLN	A	98	-8.208	26.541	46.381	1.00	37.21

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ATOM    749  CB  GLN A  98     -10.111  24.610  44.555  1.00 38.17
ATOM    750  CG  GLN A  98     -10.446  23.220  43.974  1.00 47.37
ATOM    751  CD  GLN A  98     -11.869  23.144  43.480  1.00 68.06
ATOM    752  OE1 GLN A  98     -12.676  22.343  43.981  1.00 68.25
ATOM    753  NE2 GLN A  98     -12.184  24.014  42.527  1.00 58.46
ATOM    754  N   GLU A  99      -8.007  27.049  44.206  1.00 42.57
ATOM    755  CA  GLU A  99      -7.630  28.442  44.380  1.00 43.65
ATOM    756  C   GLU A  99      -8.649  29.427  43.778  1.00 47.15
ATOM    757  O   GLU A  99      -9.262  29.166  42.734  1.00 44.38
ATOM    758  CB  GLU A  99      -6.229  28.688  43.745  1.00 44.65
ATOM    759  CG  GLU A  99      -5.210  27.549  44.026  1.00 62.98
ATOM    760  CD  GLU A  99      -3.804  27.766  43.496  1.00 92.15
ATOM    761  OE1 GLU A  99      -3.299  28.867  43.338  1.00100.00
ATOM    762  OE2 GLU A  99      -3.191  26.625  43.252  1.00 78.70
ATOM    763  N   ILE A 100      -8.801  30.565  44.468  1.00 41.83
ATOM    764  CA  ILE A 100      -9.632  31.698  44.080  1.00 38.88
ATOM    765  C   ILE A 100      -8.784  32.895  44.373  1.00 43.54
ATOM    766  O   ILE A 100      -7.812  32.830  45.135  1.00 42.91
ATOM    767  CB  ILE A 100     -10.879  31.971  44.904  1.00 42.18
ATOM    768  CG1 ILE A 100     -10.849  31.355  46.271  1.00 47.13
ATOM    769  CG2 ILE A 100     -12.225  31.875  44.204  1.00 41.40
ATOM    770  CD1 ILE A 100     -10.493  32.395  47.331  1.00 74.72
ATOM    771  N   VAL A 101      -9.156  34.001  43.784  1.00 39.29
ATOM    772  CA  VAL A 101      -8.461  35.229  44.067  1.00 37.27
ATOM    773  C   VAL A 101      -9.435  36.255  44.626  1.00 39.62
ATOM    774  O   VAL A 101     -10.516  36.464  44.098  1.00 38.28
ATOM    775  CB  VAL A 101      -7.425  35.723  43.080  1.00 36.91
ATOM    776  CG1 VAL A 101      -7.497  34.980  41.770  1.00 34.64
ATOM    777  CG2 VAL A 101      -7.482  37.237  42.939  1.00 35.34
ATOM    778  N   ILE A 102      -9.078  36.828  45.749  1.00 31.68
ATOM    779  CA  ILE A 102      -9.924  37.777  46.403  1.00 28.22
ATOM    780  C   ILE A 102      -9.328  39.135  46.284  1.00 31.14
ATOM    781  O   ILE A 102      -8.173  39.344  46.618  1.00 31.20
ATOM    782  CB  ILE A 102     -10.086  37.348  47.841  1.00 30.22
ATOM    783  CG1 ILE A 102     -10.432  35.863  47.821  1.00 30.27
ATOM    784  CG2 ILE A 102     -11.214  38.112  48.495  1.00 30.53
ATOM    785  CD1 ILE A 102     -10.807  35.275  49.187  1.00 36.83
ATOM    786  N   GLU A 103     -10.087  40.073  45.761  1.00 26.48
ATOM    787  CA  GLU A 103      -9.510  41.390  45.655  1.00 30.38
ATOM    788  C   GLU A 103     -10.196  42.340  46.596  1.00 38.06
ATOM    789  O   GLU A 103     -11.400  42.583  46.488  1.00 39.31
ATOM    790  CB  GLU A 103      -9.496  41.944  44.256  1.00 31.96
ATOM    791  CG  GLU A 103      -9.063  43.403  44.237  1.00 41.76
ATOM    792  CD  GLU A 103      -9.594  44.045  43.003  1.00 80.28
ATOM    793  OE1 GLU A 103     -10.653  44.658  42.976  1.00 97.93
ATOM    794  OE2 GLU A 103      -8.842  43.798  41.957  1.00 70.69
ATOM    795  N   ILE A 104      -9.409  42.831  47.536  1.00 33.55
ATOM    796  CA  ILE A 104      -9.900  43.716  48.562  1.00 30.57
ATOM    797  C   ILE A 104      -9.417  45.121  48.376  1.00 32.37
ATOM    798  O   ILE A 104      -8.209  45.395  48.262  1.00 28.32
ATOM    799  CB  ILE A 104      -9.522  43.227  49.955  1.00 33.68
ATOM    800  CG1 ILE A 104      -9.880  41.763  50.117  1.00 31.76
ATOM    801  CG2 ILE A 104     -10.221  44.054  51.024  1.00 32.15
ATOM    802  CD1 ILE A 104      -9.097  41.073  51.227  1.00 34.97
ATOM    803  N   SER A 105     -10.433  45.980  48.336  1.00 35.99
ATOM    804  CA  SER A 105     -10.304  47.420  48.202  1.00 37.06
ATOM    805  C   SER A 105     -10.231  47.965  49.624  1.00 32.66
ATOM    806  O   SER A 105     -11.184  47.854  50.409  1.00 27.10
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ATOM    807  CB  SER A 105     -11.479  48.007  47.438  1.00 41.57
ATOM    808  OG  SER A 105     -11.142  48.056  46.066  1.00 42.85
ATOM    809  N   PHE A 106      -9.069  48.495  49.970  1.00 26.79
ATOM    810  CA  PHE A 106      -8.932  48.950  51.316  1.00 24.44
ATOM    811  C   PHE A 106      -8.247  50.298  51.442  1.00 27.41
ATOM    812  O   PHE A 106      -7.592  50.835  50.512  1.00 23.66
ATOM    813  CB  PHE A 106      -8.098  47.870  52.069  1.00 25.82
ATOM    814  CG  PHE A 106      -6.659  47.899  51.602  1.00 26.84
ATOM    815  CD1 PHE A 106      -6.279  47.176  50.473  1.00 29.09
ATOM    816  CD2 PHE A 106      -5.690  48.683  52.244  1.00 26.96
ATOM    817  CE1 PHE A 106      -4.959  47.223  50.019  1.00 30.72
ATOM    818  CE2 PHE A 106      -4.371  48.760  51.788  1.00 27.84
ATOM    819  CZ  PHE A 106      -4.003  48.008  50.670  1.00 27.74
ATOM    820  N   GLU A 107      -8.390  50.814  52.669  1.00 27.81
ATOM    821  CA  GLU A 107      -7.776  52.082  53.054  1.00 30.68
ATOM    822  C   GLU A 107      -7.255  52.010  54.493  1.00 30.66
ATOM    823  O   GLU A 107      -7.991  51.628  55.409  1.00 32.52
ATOM    824  CB  GLU A 107      -8.744  53.268  52.866  1.00 33.19
ATOM    825  CG  GLU A 107      -8.059  54.652  52.795  1.00 50.92
ATOM    826  CD  GLU A 107      -9.053  55.794  52.621  1.00 75.89
ATOM    827  OE1 GLU A 107      -9.430  56.225  51.535  1.00 61.91
ATOM    828  OE2 GLU A 107      -9.483  56.292  53.762  1.00 47.17
ATOM    829  N   THR A 108      -5.978  52.366  54.682  1.00 26.11
ATOM    830  CA  THR A 108      -5.341  52.325  56.009  1.00 28.04
ATOM    831  C   THR A 108      -5.664  53.563  56.790  1.00 32.96
ATOM    832  O   THR A 108      -5.881  54.618  56.202  1.00 30.16
ATOM    833  CB  THR A 108      -3.787  52.277  55.957  1.00 35.08
ATOM    834  OG1 THR A 108      -3.245  53.465  55.378  1.00 29.19
ATOM    835  CG2 THR A 108      -3.254  51.032  55.245  1.00 32.38
ATOM    836  N   SER A 109      -5.650  53.417  58.112  1.00 28.09
ATOM    837  CA  SER A 109      -5.890  54.508  59.057  1.00 22.39
ATOM    838  C   SER A 109      -4.612  55.300  59.248  1.00 26.59
ATOM    839  O   SER A 109      -3.497  54.766  59.191  1.00 23.06
ATOM    840  CB  SER A 109      -6.316  53.896  60.386  1.00 23.90
ATOM    841  OG  SER A 109      -6.087  54.804  61.448  1.00 27.48
ATOM    842  N   PRO A 110      -4.720  56.594  59.495  1.00 28.89
ATOM    843  CA  PRO A 110      -3.481  57.312  59.703  1.00 27.31
ATOM    844  C   PRO A 110      -2.840  56.838  60.993  1.00 27.91
ATOM    845  O   PRO A 110      -1.651  57.033  61.172  1.00 28.30
ATOM    846  CB  PRO A 110      -3.776  58.792  59.689  1.00 28.41
ATOM    847  CG  PRO A 110      -5.188  58.921  59.138  1.00 33.97
ATOM    848  CD  PRO A 110      -5.820  57.545  59.214  1.00 30.89
ATOM    849  N   LYS A 111      -3.640  56.170  61.848  1.00 21.21
ATOM    850  CA  LYS A 111      -3.137  55.620  63.098  1.00 21.20
ATOM    851  C   LYS A 111      -2.634  54.163  62.972  1.00 24.12
ATOM    852  O   LYS A 111      -2.502  53.476  63.990  1.00 27.31
ATOM    853  CB  LYS A 111      -4.188  55.688  64.202  1.00 24.13
ATOM    854  CG  LYS A 111      -4.435  57.079  64.786  1.00 44.09
ATOM    855  CD  LYS A 111      -5.146  58.027  63.832  1.00 80.95
ATOM    856  CE  LYS A 111      -6.627  57.733  63.614  1.00100.00
ATOM    857  NZ  LYS A 111      -7.193  58.483  62.473  1.00100.00
ATOM    858  N   SER A 112      -2.371  53.669  61.743  1.00 21.95
ATOM    859  CA  SER A 112      -1.891  52.278  61.499  1.00 21.09
ATOM    860  C   SER A 112      -0.709  51.968  62.438  1.00 23.23
ATOM    861  O   SER A 112       0.236  52.722  62.472  1.00 25.25
ATOM    862  CB  SER A 112      -1.467  52.084  60.034  1.00 17.80
ATOM    863  OG  SER A 112      -0.821  50.850  59.845  1.00 19.72
ATOM    864  N   SER A 113      -0.752  50.884  63.203  1.00 19.64
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ATOM	865	CA	SER	A	113	0.342	50.587	64.087	1.00 16.68
ATOM	866	C	SER	A	113	1.539	50.087	63.316	1.00 22.16
ATOM	867	O	SER	A	113	2.653	50.005	63.822	1.00 21.53
ATOM	868	CB	SER	A	113	-0.061	49.633	65.183	1.00 20.15
ATOM	869	OG	SER	A	113	-0.358	48.369	64.663	1.00 23.41
ATOM	870	N	ALA	A	114	1.325	49.741	62.059	1.00 21.04
ATOM	871	CA	ALA	A	114	2.432	49.266	61.221	1.00 19.34
ATOM	872	C	ALA	A	114	3.212	50.412	60.581	1.00 20.25
ATOM	873	O	ALA	A	114	4.287	50.210	60.004	1.00 20.84
ATOM	874	CB	ALA	A	114	1.876	48.455	60.061	1.00 19.26
ATOM	875	N	LEU	A	115	2.636	51.614	60.636	1.00 17.27
ATOM	876	CA	LEU	A	115	3.281	52.725	59.992	1.00 19.18
ATOM	877	C	LEU	A	115	3.619	53.896	60.870	1.00 22.95
ATOM	878	O	LEU	A	115	3.042	54.162	61.924	1.00 22.70
ATOM	879	CB	LEU	A	115	2.418	53.298	58.851	1.00 18.69
ATOM	880	CG	LEU	A	115	1.844	52.219	57.960	1.00 24.36
ATOM	881	CD1	LEU	A	115	0.784	52.871	57.078	1.00 26.30
ATOM	882	CD2	LEU	A	115	2.954	51.654	57.070	1.00 21.90
ATOM	883	N	GLN	A	116	4.573	54.621	60.358	1.00 19.91
ATOM	884	CA	GLN	A	116	4.959	55.857	60.974	1.00 19.64
ATOM	885	C	GLN	A	116	5.071	56.896	59.851	1.00 22.36
ATOM	886	O	GLN	A	116	5.898	56.769	58.943	1.00 21.29
ATOM	887	CB	GLN	A	116	6.195	55.857	61.891	1.00 21.78
ATOM	888	CG	GLN	A	116	6.297	57.220	62.637	1.00 28.22
ATOM	889	CD	GLN	A	116	7.539	57.423	63.481	1.00 33.89
ATOM	890	OE1	GLN	A	116	8.458	56.585	63.489	1.00 21.37
ATOM	891	NE2	GLN	A	116	7.569	58.557	64.198	1.00 25.06
ATOM	892	N	TRP	A	117	4.207	57.898	59.926	1.00 21.50
ATOM	893	CA	TRP	A	117	4.163	58.982	58.973	1.00 22.21
ATOM	894	C	TRP	A	117	4.909	60.164	59.588	1.00 24.80
ATOM	895	O	TRP	A	117	4.500	60.677	60.633	1.00 24.36
ATOM	896	CB	TRP	A	117	2.706	59.380	58.730	1.00 20.63
ATOM	897	CG	TRP	A	117	1.887	58.374	57.979	1.00 21.43
ATOM	898	CD1	TRP	A	117	1.079	57.439	58.532	1.00 24.14
ATOM	899	CD2	TRP	A	117	1.736	58.258	56.562	1.00 20.88
ATOM	900	NE1	TRP	A	117	0.467	56.706	57.553	1.00 22.57
ATOM	901	CE2	TRP	A	117	0.832	57.196	56.331	1.00 24.10
ATOM	902	CE3	TRP	A	117	2.279	58.953	55.467	1.00 23.47
ATOM	903	CZ2	TRP	A	117	0.450	56.806	55.038	1.00 24.69
ATOM	904	CZ3	TRP	A	117	1.929	58.563	54.182	1.00 26.53
ATOM	905	CH2	TRP	A	117	1.022	57.503	53.974	1.00 27.59
ATOM	906	N	LEU	A	118	6.000	60.565	58.932	1.00 19.11
ATOM	907	CA	LEU	A	118	6.864	61.652	59.372	1.00 20.20
ATOM	908	C	LEU	A	118	6.594	62.936	58.603	1.00 29.18
ATOM	909	O	LEU	A	118	6.422	62.907	57.379	1.00 29.44
ATOM	910	CB	LEU	A	118	8.364	61.287	59.137	1.00 21.47
ATOM	911	CG	LEU	A	118	8.985	60.284	60.141	1.00 28.52
ATOM	912	CD1	LEU	A	118	8.137	59.016	60.275	1.00 30.03
ATOM	913	CD2	LEU	A	118	10.410	59.939	59.716	1.00 27.52
ATOM	914	N	THR	A	119	6.573	64.076	59.305	1.00 23.98
ATOM	915	CA	THR	A	119	6.379	65.362	58.636	1.00 19.34
ATOM	916	C	THR	A	119	7.776	65.731	58.183	1.00 23.45
ATOM	917	O	THR	A	119	8.736	65.253	58.783	1.00 24.77
ATOM	918	CB	THR	A	119	5.910	66.402	59.682	1.00 26.76
ATOM	919	OG1	THR	A	119	6.915	66.529	60.673	1.00 27.33
ATOM	920	CG2	THR	A	119	4.637	65.950	60.390	1.00 28.42
ATOM	921	N	PRO	A	120	7.933	66.565	57.151	1.00 22.29
ATOM	922	CA	PRO	A	120	9.255	66.927	56.678	1.00 22.30

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ATOM	923	C	PRO	A	120	10.178	67.419	57.800	1.00 28.55
ATOM	924	O	PRO	A	120	11.404	67.260	57.754	1.00 27.54
ATOM	925	CB	PRO	A	120	9.059	68.024	55.624	1.00 23.05
ATOM	926	CG	PRO	A	120	7.581	68.150	55.384	1.00 24.12
ATOM	927	CD	PRO	A	120	6.876	67.282	56.407	1.00 21.87
ATOM	928	N	GLU	A	121	9.583	68.022	58.822	1.00 28.60
ATOM	929	CA	GLU	A	121	10.366	68.529	59.937	1.00 31.89
ATOM	930	C	GLU	A	121	11.104	67.394	60.658	1.00 37.79
ATOM	931	O	GLU	A	121	12.205	67.554	61.198	1.00 35.72
ATOM	932	CB	GLU	A	121	9.442	69.247	60.938	1.00 34.43
ATOM	933	CG	GLU	A	121	8.757	70.526	60.397	1.00 61.71
ATOM	934	CD	GLU	A	121	7.773	70.370	59.250	1.00 95.37
ATOM	935	OE1	GLU	A	121	6.808	69.624	59.252	1.00 50.70
ATOM	936	OE2	GLU	A	121	8.033	71.193	58.262	1.00100.00
ATOM	937	N	GLN	A	122	10.456	66.228	60.673	1.00 33.10
ATOM	938	CA	GLN	A	122	11.011	65.066	61.339	1.00 30.63
ATOM	939	C	GLN	A	122	12.104	64.392	60.538	1.00 33.25
ATOM	940	O	GLN	A	122	12.637	63.388	60.962	1.00 33.00
ATOM	941	CB	GLN	A	122	9.905	64.039	61.637	1.00 30.70
ATOM	942	CG	GLN	A	122	8.966	64.462	62.774	1.00 23.20
ATOM	943	CD	GLN	A	122	7.703	63.620	62.818	1.00 27.73
ATOM	944	OE1	GLN	A	122	6.781	63.798	62.016	1.00 34.90
ATOM	945	NE2	GLN	A	122	7.655	62.689	63.757	1.00 30.55
ATOM	946	N	THR	A	123	12.427	64.912	59.356	1.00 29.61
ATOM	947	CA	THR	A	123	13.438	64.288	58.495	1.00 27.96
ATOM	948	C	THR	A	123	14.730	65.030	58.506	1.00 31.63
ATOM	949	O	THR	A	123	14.831	66.111	59.060	1.00 34.46
ATOM	950	CB	THR	A	123	12.966	64.183	57.029	1.00 24.54
ATOM	951	OG1	THR	A	123	12.855	65.504	56.515	1.00 28.43
ATOM	952	CG2	THR	A	123	11.594	63.521	56.985	1.00 18.48
ATOM	953	N	SER	A	124	15.712	64.440	57.870	1.00 24.71
ATOM	954	CA	SER	A	124	16.980	65.088	57.814	1.00 25.71
ATOM	955	C	SER	A	124	16.886	66.308	56.900	1.00 34.45
ATOM	956	O	SER	A	124	17.399	67.377	57.227	1.00 34.98
ATOM	957	CB	SER	A	124	18.094	64.182	57.317	1.00 25.78
ATOM	958	OG	SER	A	124	18.268	63.099	58.177	1.00 34.37
ATOM	959	N	GLY	A	125	16.221	66.110	55.756	1.00 32.47
ATOM	960	CA	GLY	A	125	16.042	67.119	54.717	1.00 33.54
ATOM	961	C	GLY	A	125	15.086	68.279	55.024	1.00 38.01
ATOM	962	O	GLY	A	125	15.226	69.371	54.450	1.00 35.01
ATOM	963	N	LYS	A	126	14.100	68.055	55.893	1.00 32.87
ATOM	964	CA	LYS	A	126	13.181	69.126	56.236	1.00 30.74
ATOM	965	C	LYS	A	126	12.281	69.626	55.101	1.00 34.13
ATOM	966	O	LYS	A	126	11.453	70.517	55.351	1.00 33.10
ATOM	967	CB	LYS	A	126	13.940	70.303	56.823	1.00 31.29
ATOM	968	CG	LYS	A	126	15.031	69.877	57.790	1.00 34.55
ATOM	969	CD	LYS	A	126	14.459	69.111	58.962	1.00 40.18
ATOM	970	CE	LYS	A	126	15.496	68.661	59.973	1.00 41.28
ATOM	971	NZ	LYS	A	126	14.895	67.775	60.987	1.00 46.79
ATOM	972	N	GLU	A	127	12.436	69.079	53.869	1.00 27.28
ATOM	973	CA	GLU	A	127	11.617	69.510	52.737	1.00 26.31
ATOM	974	C	GLU	A	127	10.566	68.517	52.300	1.00 35.95
ATOM	975	O	GLU	A	127	9.636	68.879	51.575	1.00 35.05
ATOM	976	CB	GLU	A	127	12.460	69.926	51.535	1.00 27.71
ATOM	977	CG	GLU	A	127	13.434	71.052	51.871	1.00 37.61
ATOM	978	CD	GLU	A	127	12.763	72.391	51.971	1.00 42.53
ATOM	979	OE1	GLU	A	127	11.816	72.730	51.272	1.00 63.41
ATOM	980	OE2	GLU	A	127	13.334	73.149	52.873	1.00 42.43

ATOM	981	N	HIS	A	128	10.729	67.260	52.730	1.00	32.31
ATOM	982	CA	HIS	A	128	9.786	66.221	52.395	1.00	29.92
ATOM	983	C	HIS	A	128	9.400	65.337	53.570	1.00	27.82
ATOM	984	O	HIS	A	128	10.117	65.179	54.549	1.00	29.92
ATOM	985	CB	HIS	A	128	10.345	65.324	51.308	1.00	29.24
ATOM	986	CG	HIS	A	128	10.843	66.080	50.152	1.00	31.61
ATOM	987	ND1	HIS	A	128	9.978	66.601	49.205	1.00	33.89
ATOM	988	CD2	HIS	A	128	12.113	66.358	49.795	1.00	34.18
ATOM	989	CE1	HIS	A	128	10.738	67.176	48.294	1.00	33.86
ATOM	990	NE2	HIS	A	128	12.030	67.053	48.618	1.00	34.37
ATOM	991	N	PRO	A	129	8.261	64.747	53.430	1.00	21.92
ATOM	992	CA	PRO	A	129	7.756	63.846	54.424	1.00	21.51
ATOM	993	C	PRO	A	129	8.419	62.474	54.216	1.00	26.61
ATOM	994	O	PRO	A	129	9.302	62.284	53.376	1.00	25.02
ATOM	995	CB	PRO	A	129	6.265	63.736	54.162	1.00	21.80
ATOM	996	CG	PRO	A	129	6.098	64.059	52.690	1.00	28.71
ATOM	997	CD	PRO	A	129	7.353	64.818	52.263	1.00	23.90
ATOM	998	N	TYR	A	130	8.016	61.498	54.998	1.00	22.26
ATOM	999	CA	TYR	A	130	8.646	60.195	54.881	1.00	20.30
ATOM	1000	C	TYR	A	130	7.747	59.148	55.492	1.00	23.74
ATOM	1001	O	TYR	A	130	7.022	59.381	56.442	1.00	23.54
ATOM	1002	CB	TYR	A	130	9.959	60.250	55.663	1.00	20.15
ATOM	1003	CG	TYR	A	130	10.909	59.072	55.574	1.00	23.26
ATOM	1004	CD1	TYR	A	130	10.623	57.805	56.104	1.00	23.27
ATOM	1005	CD2	TYR	A	130	12.148	59.271	54.966	1.00	24.16
ATOM	1006	CE1	TYR	A	130	11.555	56.765	56.013	1.00	20.09
ATOM	1007	CE2	TYR	A	130	13.100	58.255	54.888	1.00	23.94
ATOM	1008	CZ	TYR	A	130	12.795	57.001	55.410	1.00	19.50
ATOM	1009	OH	TYR	A	130	13.751	56.053	55.281	1.00	24.55
ATOM	1010	N	LEU	A	131	7.764	57.970	54.948	1.00	21.39
ATOM	1011	CA	LEU	A	131	6.916	56.975	55.551	1.00	23.29
ATOM	1012	C	LEU	A	131	7.671	55.654	55.583	1.00	26.48
ATOM	1013	O	LEU	A	131	8.450	55.368	54.658	1.00	22.90
ATOM	1014	CB	LEU	A	131	5.632	56.805	54.721	1.00	22.31
ATOM	1015	CG	LEU	A	131	4.960	55.462	54.943	1.00	24.82
ATOM	1016	CD1	LEU	A	131	4.060	55.574	56.168	1.00	24.09
ATOM	1017	CD2	LEU	A	131	4.166	55.056	53.690	1.00	23.63
ATOM	1018	N	PHE	A	132	7.463	54.866	56.631	1.00	24.01
ATOM	1019	CA	PHE	A	132	8.101	53.539	56.711	1.00	23.69
ATOM	1020	C	PHE	A	132	7.231	52.575	57.474	1.00	23.59
ATOM	1021	O	PHE	A	132	6.529	52.952	58.394	1.00	20.95
ATOM	1022	CB	PHE	A	132	9.545	53.507	57.253	1.00	25.79
ATOM	1023	CG	PHE	A	132	9.654	53.806	58.740	1.00	26.81
ATOM	1024	CD1	PHE	A	132	9.338	52.852	59.713	1.00	26.02
ATOM	1025	CD2	PHE	A	132	10.102	55.055	59.169	1.00	24.48
ATOM	1026	CE1	PHE	A	132	9.458	53.144	61.074	1.00	24.42
ATOM	1027	CE2	PHE	A	132	10.230	55.362	60.525	1.00	23.41
ATOM	1028	CZ	PHE	A	132	9.900	54.403	61.485	1.00	19.60
ATOM	1029	N	SER	A	133	7.246	51.322	57.103	1.00	20.10
ATOM	1030	CA	SER	A	133	6.434	50.355	57.804	1.00	17.87
ATOM	1031	C	SER	A	133	7.320	49.461	58.639	1.00	18.33
ATOM	1032	O	SER	A	133	8.539	49.439	58.517	1.00	21.07
ATOM	1033	CB	SER	A	133	5.739	49.451	56.811	1.00	24.24
ATOM	1034	OG	SER	A	133	6.735	48.694	56.128	1.00	24.12
ATOM	1035	N	GLN	A	134	6.659	48.710	59.463	1.00	15.44
ATOM	1036	CA	GLN	A	134	7.268	47.748	60.340	1.00	16.95
ATOM	1037	C	GLN	A	134	6.181	46.760	60.729	1.00	21.06
ATOM	1038	O	GLN	A	134	5.401	46.994	61.632	1.00	22.06

ATOM	1039	CB	GLN	A	134	7.966	48.415	61.526	1.00 16.26
ATOM	1040	CG	GLN	A	134	8.392	47.346	62.549	1.00 24.87
ATOM	1041	CD	GLN	A	134	9.424	46.414	61.955	1.00 36.09
ATOM	1042	OE1	GLN	A	134	10.363	46.862	61.280	1.00 25.12
ATOM	1043	NE2	GLN	A	134	9.242	45.111	62.187	1.00 30.48
ATOM	1044	N	CYS	A	135	6.076	45.647	60.013	1.00 15.84
ATOM	1045	CA	CYS	A	135	5.025	44.712	60.313	1.00 16.52
ATOM	1046	C	CYS	A	135	5.298	43.683	61.381	1.00 18.38
ATOM	1047	O	CYS	A	135	4.354	43.170	61.995	1.00 19.10
ATOM	1048	CB	CYS	A	135	4.649	43.908	59.067	1.00 20.50
ATOM	1049	SG	CYS	A	135	4.051	44.971	57.762	1.00 25.25
ATOM	1050	N	GLN	A	136	6.545	43.284	61.564	1.00 16.69
ATOM	1051	CA	GLN	A	136	6.756	42.242	62.572	1.00 16.53
ATOM	1052	C	GLN	A	136	6.454	42.824	63.926	1.00 20.04
ATOM	1053	O	GLN	A	136	6.853	43.946	64.194	1.00 21.71
ATOM	1054	CB	GLN	A	136	8.204	41.703	62.520	1.00 18.54
ATOM	1055	CG	GLN	A	136	8.488	40.565	63.533	1.00 16.78
ATOM	1056	CD	GLN	A	136	9.930	40.052	63.434	1.00 27.57
ATOM	1057	OE1	GLN	A	136	10.835	40.746	62.930	1.00 19.61
ATOM	1058	NE2	GLN	A	136	10.141	38.826	63.903	1.00 25.09
ATOM	1059	N	ALA	A	137	5.730	42.087	64.769	1.00 16.79
ATOM	1060	CA	ALA	A	137	5.243	40.724	64.514	1.00 16.58
ATOM	1061	C	ALA	A	137	3.931	40.636	63.807	1.00 20.75
ATOM	1062	O	ALA	A	137	3.798	39.912	62.836	1.00 19.63
ATOM	1063	CB	ALA	A	137	5.087	39.918	65.813	1.00 16.76
ATOM	1064	N	ILE	A	138	2.951	41.338	64.321	1.00 18.31
ATOM	1065	CA	ILE	A	138	1.647	41.247	63.721	1.00 18.68
ATOM	1066	C	ILE	A	138	1.065	42.566	63.294	1.00 19.68
ATOM	1067	O	ILE	A	138	-0.053	42.896	63.633	1.00 21.65
ATOM	1068	CB	ILE	A	138	0.727	40.532	64.692	1.00 20.75
ATOM	1069	CG1	ILE	A	138	0.761	41.275	66.024	1.00 21.55
ATOM	1070	CG2	ILE	A	138	1.241	39.124	64.882	1.00 17.75
ATOM	1071	CD1	ILE	A	138	-0.211	40.698	67.044	1.00 23.44
ATOM	1072	N	HIS	A	139	1.789	43.309	62.525	1.00 19.15
ATOM	1073	CA	HIS	A	139	1.231	44.581	62.113	1.00 19.05
ATOM	1074	C	HIS	A	139	0.899	44.615	60.644	1.00 23.60
ATOM	1075	O	HIS	A	139	0.427	45.604	60.127	1.00 25.90
ATOM	1076	CB	HIS	A	139	2.149	45.781	62.471	1.00 19.09
ATOM	1077	CG	HIS	A	139	2.429	45.870	63.961	1.00 21.83
ATOM	1078	ND1	HIS	A	139	1.476	46.324	64.872	1.00 22.32
ATOM	1079	CD2	HIS	A	139	3.547	45.567	64.661	1.00 21.82
ATOM	1080	CE1	HIS	A	139	2.022	46.253	66.072	1.00 21.72
ATOM	1081	NE2	HIS	A	139	3.259	45.811	65.980	1.00 21.41
ATOM	1082	N	CYS	A	140	1.175	43.545	59.942	1.00 21.39
ATOM	1083	CA	CYS	A	140	0.854	43.573	58.525	1.00 21.71
ATOM	1084	C	CYS	A	140	-0.630	43.848	58.327	1.00 20.64
ATOM	1085	O	CYS	A	140	-1.071	44.542	57.405	1.00 21.98
ATOM	1086	CB	CYS	A	140	1.237	42.260	57.823	1.00 22.30
ATOM	1087	SG	CYS	A	140	1.089	42.457	56.029	1.00 27.57
ATOM	1088	N	ARG	A	141	-1.384	43.259	59.232	1.00 18.28
ATOM	1089	CA	ARG	A	141	-2.819	43.369	59.261	1.00 20.32
ATOM	1090	C	ARG	A	141	-3.265	44.823	59.352	1.00 27.93
ATOM	1091	O	ARG	A	141	-4.438	45.135	59.078	1.00 29.72
ATOM	1092	CB	ARG	A	141	-3.436	42.518	60.369	1.00 16.68
ATOM	1093	CG	ARG	A	141	-3.035	42.944	61.781	1.00 18.27
ATOM	1094	CD	ARG	A	141	-3.571	41.985	62.866	1.00 15.44
ATOM	1095	NE	ARG	A	141	-2.857	40.717	62.896	1.00 20.15
ATOM	1096	CZ	ARG	A	141	-2.996	39.785	63.813	1.00 20.72

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ATOM   1097  NH1 ARG A 141      -3.825  39.908  64.827  1.00 16.67
ATOM   1098  NH2 ARG A 141      -2.258  38.692  63.685  1.00 22.83
ATOM   1099  N   ALA A 142      -2.314  45.707  59.754  1.00 18.15
ATOM   1100  CA  ALA A 142      -2.599  47.127  59.901  1.00 17.64
ATOM   1101  C   ALA A 142      -2.265  47.823  58.619  1.00 22.89
ATOM   1102  O   ALA A 142      -2.296  49.024  58.506  1.00 22.38
ATOM   1103  CB  ALA A 142      -1.908  47.771  61.085  1.00 17.04
ATOM   1104  N   ILE A 143      -1.925  47.041  57.621  1.00 24.40
ATOM   1105  CA  ILE A 143      -1.634  47.632  56.341  1.00 25.97
ATOM   1106  C   ILE A 143      -2.641  47.117  55.334  1.00 33.49
ATOM   1107  O   ILE A 143      -3.259  47.865  54.585  1.00 36.37
ATOM   1108  CB  ILE A 143      -0.222  47.447  55.839  1.00 29.94
ATOM   1109  CG1 ILE A 143       0.791  47.972  56.853  1.00 29.88
ATOM   1110  CG2 ILE A 143      -0.094  48.232  54.533  1.00 33.06
ATOM   1111  CD1 ILE A 143       2.224  47.722  56.389  1.00 26.42
ATOM   1112  N   LEU A 144      -2.843  45.822  55.350  1.00 28.38
ATOM   1113  CA  LEU A 144      -3.815  45.204  54.438  1.00 29.40
ATOM   1114  C   LEU A 144      -4.421  43.917  55.030  1.00 33.99
ATOM   1115  O   LEU A 144      -3.928  43.349  56.037  1.00 30.51
ATOM   1116  CB  LEU A 144      -3.213  44.969  53.037  1.00 30.43
ATOM   1117  CG  LEU A 144      -1.868  44.266  53.111  1.00 33.80
ATOM   1118  CD1 LEU A 144      -2.073  42.761  53.007  1.00 35.20
ATOM   1119  CD2 LEU A 144      -0.935  44.758  52.023  1.00 38.26
ATOM   1120  N   PRO A 145      -5.507  43.446  54.432  1.00 27.43
ATOM   1121  CA  PRO A 145      -6.094  42.259  54.979  1.00 25.19
ATOM   1122  C   PRO A 145      -5.294  41.059  54.513  1.00 23.80
ATOM   1123  O   PRO A 145      -4.832  41.009  53.376  1.00 23.96
ATOM   1124  CB  PRO A 145      -7.567  42.266  54.566  1.00 27.07
ATOM   1125  CG  PRO A 145      -7.810  43.609  53.886  1.00 31.08
ATOM   1126  CD  PRO A 145      -6.445  44.131  53.505  1.00 26.31
ATOM   1127  N   CYS A 146      -5.080  40.145  55.448  1.00 23.01
ATOM   1128  CA  CYS A 146      -4.272  38.956  55.215  1.00 24.70
ATOM   1129  C   CYS A 146      -4.329  37.973  56.367  1.00 28.20
ATOM   1130  O   CYS A 146      -4.966  38.211  57.413  1.00 23.14
ATOM   1131  CB  CYS A 146      -2.793  39.335  55.036  1.00 25.42
ATOM   1132  SG  CYS A 146      -2.164  40.274  56.463  1.00 31.88
ATOM   1133  N   GLN A 147      -3.647  36.843  56.134  1.00 22.82
ATOM   1134  CA  GLN A 147      -3.522  35.796  57.127  1.00 23.08
ATOM   1135  C   GLN A 147      -2.238  36.197  57.832  1.00 28.00
ATOM   1136  O   GLN A 147      -1.131  35.841  57.415  1.00 25.08
ATOM   1137  CB  GLN A 147      -3.346  34.427  56.449  1.00 24.85
ATOM   1138  CG  GLN A 147      -4.671  33.762  56.084  1.00 19.17
ATOM   1139  CD  GLN A 147      -4.391  32.428  55.427  1.00 25.96
ATOM   1140  OE1 GLN A 147      -3.871  32.408  54.311  1.00 20.64
ATOM   1141  NE2 GLN A 147      -4.680  31.326  56.117  1.00 20.44
ATOM   1142  N   ASP A 148      -2.408  37.011  58.860  1.00 23.32
ATOM   1143  CA  ASP A 148      -1.295  37.566  59.587  1.00 23.26
ATOM   1144  C   ASP A 148      -0.627  36.639  60.595  1.00 23.40
ATOM   1145  O   ASP A 148      -0.574  36.941  61.790  1.00 24.25
ATOM   1146  CB  ASP A 148      -1.665  38.916  60.237  1.00 24.70
ATOM   1147  CG  ASP A 148      -0.440  39.722  60.517  1.00 27.92
ATOM   1148  OD1 ASP A 148       0.678  39.389  60.113  1.00 27.89
ATOM   1149  OD2 ASP A 148      -0.695  40.795  61.224  1.00 19.92
ATOM   1150  N   THR A 149      -0.099  35.537  60.060  1.00 19.68
ATOM   1151  CA  THR A 149       0.607  34.501  60.793  1.00 18.44
ATOM   1152  C   THR A 149       1.818  34.079  59.981  1.00 23.20
ATOM   1153  O   THR A 149       1.761  34.027  58.741  1.00 18.98
ATOM   1154  CB  THR A 149      -0.261  33.256  61.004  1.00 29.08
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ATOM	1155	OG1	THR	A	149	0.577	32.168	61.421	1.00	24.67
ATOM	1156	CG2	THR	A	149	-0.979	32.910	59.680	1.00	23.64
ATOM	1157	N	PRO	A	150	2.921	33.765	60.686	1.00	21.90
ATOM	1158	CA	PRO	A	150	4.159	33.323	60.016	1.00	19.21
ATOM	1159	C	PRO	A	150	4.018	31.886	59.479	1.00	21.32
ATOM	1160	O	PRO	A	150	4.898	31.352	58.829	1.00	18.90
ATOM	1161	CB	PRO	A	150	5.260	33.356	61.103	1.00	19.24
ATOM	1162	CG	PRO	A	150	4.544	33.455	62.444	1.00	20.32
ATOM	1163	CD	PRO	A	150	3.125	33.922	62.168	1.00	20.18
ATOM	1164	N	SER	A	151	2.902	31.226	59.771	1.00	18.68
ATOM	1165	CA	SER	A	151	2.737	29.862	59.276	1.00	20.66
ATOM	1166	C	SER	A	151	2.351	29.863	57.820	1.00	22.40
ATOM	1167	O	SER	A	151	2.295	28.836	57.199	1.00	26.24
ATOM	1168	CB	SER	A	151	1.674	29.117	60.057	1.00	25.01
ATOM	1169	OG	SER	A	151	0.444	29.814	59.897	1.00	32.09
ATOM	1170	N	VAL	A	152	2.086	31.017	57.282	1.00	18.17
ATOM	1171	CA	VAL	A	152	1.696	31.105	55.899	1.00	20.54
ATOM	1172	C	VAL	A	152	2.740	31.874	55.088	1.00	26.40
ATOM	1173	O	VAL	A	152	3.159	32.955	55.494	1.00	25.43
ATOM	1174	CB	VAL	A	152	0.307	31.756	55.773	1.00	22.01
ATOM	1175	CG1	VAL	A	152	0.000	32.092	54.316	1.00	21.07
ATOM	1176	CG2	VAL	A	152	-0.742	30.818	56.325	1.00	21.78
ATOM	1177	N	LYS	A	153	3.163	31.316	53.934	1.00	21.69
ATOM	1178	CA	LYS	A	153	4.146	31.985	53.101	1.00	20.64
ATOM	1179	C	LYS	A	153	3.606	32.223	51.720	1.00	25.15
ATOM	1180	O	LYS	A	153	3.041	31.329	51.114	1.00	27.06
ATOM	1181	CB	LYS	A	153	5.455	31.218	53.016	1.00	24.18
ATOM	1182	CG	LYS	A	153	6.159	31.061	54.360	1.00	29.97
ATOM	1183	CD	LYS	A	153	7.582	30.546	54.220	1.00	19.10
ATOM	1184	CE	LYS	A	153	8.276	30.287	55.546	1.00	24.45
ATOM	1185	NZ	LYS	A	153	9.760	30.289	55.457	1.00	21.92
ATOM	1186	N	LEU	A	154	3.768	33.438	51.213	1.00	22.90
ATOM	1187	CA	LEU	A	154	3.286	33.772	49.876	1.00	22.75
ATOM	1188	C	LEU	A	154	4.280	34.594	49.091	1.00	23.26
ATOM	1189	O	LEU	A	154	5.225	35.207	49.624	1.00	21.95
ATOM	1190	CB	LEU	A	154	1.989	34.615	49.972	1.00	23.48
ATOM	1191	CG	LEU	A	154	2.246	35.948	50.729	1.00	29.06
ATOM	1192	CD1	LEU	A	154	1.385	37.086	50.200	1.00	29.05
ATOM	1193	CD2	LEU	A	154	1.986	35.788	52.225	1.00	26.55
ATOM	1194	N	THR	A	155	4.033	34.653	47.791	1.00	22.63
ATOM	1195	CA	THR	A	155	4.862	35.499	46.940	1.00	25.54
ATOM	1196	C	THR	A	155	4.088	36.820	46.772	1.00	26.35
ATOM	1197	O	THR	A	155	2.929	36.943	47.190	1.00	25.33
ATOM	1198	CB	THR	A	155	5.122	34.931	45.526	1.00	26.50
ATOM	1199	OG1	THR	A	155	3.937	34.294	45.141	1.00	31.87
ATOM	1200	CG2	THR	A	155	6.327	33.991	45.488	1.00	21.48
ATOM	1201	N	TYR	A	156	4.721	37.802	46.154	1.00	23.09
ATOM	1202	CA	TYR	A	156	4.021	39.040	45.943	1.00	22.25
ATOM	1203	C	TYR	A	156	4.631	39.924	44.889	1.00	24.76
ATOM	1204	O	TYR	A	156	5.846	39.919	44.601	1.00	28.65
ATOM	1205	CB	TYR	A	156	3.735	39.831	47.252	1.00	22.99
ATOM	1206	CG	TYR	A	156	4.853	40.754	47.751	1.00	24.46
ATOM	1207	CD1	TYR	A	156	4.992	42.048	47.246	1.00	26.47
ATOM	1208	CD2	TYR	A	156	5.744	40.356	48.755	1.00	22.08
ATOM	1209	CE1	TYR	A	156	6.003	42.894	47.704	1.00	27.20
ATOM	1210	CE2	TYR	A	156	6.755	41.194	49.242	1.00	19.36
ATOM	1211	CZ	TYR	A	156	6.874	42.476	48.709	1.00	28.26
ATOM	1212	OH	TYR	A	156	7.819	43.341	49.176	1.00	23.92

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ATOM   1213  N   THR A 157       3.737  40.711  44.325  1.00 20.53
ATOM   1214  CA  THR A 157       4.079  41.726  43.358  1.00 22.66
ATOM   1215  C   THR A 157       3.374  42.996  43.844  1.00 27.95
ATOM   1216  O   THR A 157       2.300  42.941  44.469  1.00 27.60
ATOM   1217  CB  THR A 157       3.660  41.345  41.931  1.00 36.12
ATOM   1218  OG1 THR A 157       2.311  40.913  41.927  1.00 35.88
ATOM   1219  CG2 THR A 157       4.528  40.177  41.502  1.00 31.47
ATOM   1220  N   ALA A 158       3.984  44.136  43.604  1.00 26.56
ATOM   1221  CA  ALA A 158       3.357  45.363  44.034  1.00 28.25
ATOM   1222  C   ALA A 158       3.661  46.555  43.115  1.00 33.79
ATOM   1223  O   ALA A 158       4.737  46.682  42.469  1.00 31.04
ATOM   1224  CB  ALA A 158       3.749  45.700  45.460  1.00 26.89
ATOM   1225  N   GLU A 159       2.693  47.453  43.081  1.00 30.94
ATOM   1226  CA  GLU A 159       2.863  48.658  42.328  1.00 32.37
ATOM   1227  C   GLU A 159       2.434  49.789  43.226  1.00 31.24
ATOM   1228  O   GLU A 159       1.311  49.803  43.735  1.00 29.85
ATOM   1229  CB  GLU A 159       2.118  48.680  40.993  1.00 35.41
ATOM   1230  CG  GLU A 159       1.749  47.300  40.444  1.00 59.87
ATOM   1231  CD  GLU A 159       0.983  47.438  39.160  1.00 98.76
ATOM   1232  OE1 GLU A 159      -0.110  47.979  39.091  1.00 78.51
ATOM   1233  OE2 GLU A 159       1.636  46.958  38.126  1.00100.00
ATOM   1234  N   VAL A 160       3.337  50.714  43.472  1.00 28.73
ATOM   1235  CA  VAL A 160       2.915  51.778  44.352  1.00 29.43
ATOM   1236  C   VAL A 160       3.180  53.148  43.786  1.00 29.09
ATOM   1237  O   VAL A 160       4.292  53.442  43.354  1.00 27.09
ATOM   1238  CB  VAL A 160       3.370  51.589  45.785  1.00 33.76
ATOM   1239  CG1 VAL A 160       4.212  50.321  45.892  1.00 33.85
ATOM   1240  CG2 VAL A 160       4.097  52.814  46.314  1.00 32.12
ATOM   1241  N   SER A 161       2.132  53.967  43.760  1.00 29.81
ATOM   1242  CA  SER A 161       2.249  55.323  43.202  1.00 29.33
ATOM   1243  C   SER A 161       2.558  56.310  44.299  1.00 30.68
ATOM   1244  O   SER A 161       1.840  56.364  45.299  1.00 32.33
ATOM   1245  CB  SER A 161       0.963  55.756  42.514  1.00 32.12
ATOM   1246  OG  SER A 161       1.074  57.091  42.092  1.00 36.30
ATOM   1247  N   VAL A 162       3.614  57.073  44.115  1.00 24.51
ATOM   1248  CA  VAL A 162       3.968  58.033  45.125  1.00 25.24
ATOM   1249  C   VAL A 162       4.187  59.371  44.477  1.00 37.10
ATOM   1250  O   VAL A 162       4.359  59.438  43.257  1.00 36.28
ATOM   1251  CB  VAL A 162       5.284  57.657  45.821  1.00 25.44
ATOM   1252  CG1 VAL A 162       5.213  56.287  46.487  1.00 24.46
ATOM   1253  CG2 VAL A 162       6.429  57.684  44.831  1.00 24.47
ATOM   1254  N   PRO A 163       4.203  60.416  45.312  1.00 31.09
ATOM   1255  CA  PRO A 163       4.476  61.733  44.805  1.00 31.84
ATOM   1256  C   PRO A 163       5.792  61.640  44.040  1.00 31.38
ATOM   1257  O   PRO A 163       6.821  61.177  44.545  1.00 30.83
ATOM   1258  CB  PRO A 163       4.545  62.640  46.047  1.00 33.90
ATOM   1259  CG  PRO A 163       3.818  61.891  47.158  1.00 36.16
ATOM   1260  CD  PRO A 163       3.635  60.458  46.680  1.00 29.11
ATOM   1261  N   LYS A 164       5.738  62.040  42.789  1.00 30.95
ATOM   1262  CA  LYS A 164       6.875  61.950  41.891  1.00 30.90
ATOM   1263  C   LYS A 164       8.223  62.361  42.405  1.00 32.87
ATOM   1264  O   LYS A 164       9.249  61.973  41.850  1.00 29.98
ATOM   1265  CB  LYS A 164       6.614  62.525  40.525  1.00 38.69
ATOM   1266  CG  LYS A 164       5.381  63.405  40.464  1.00 60.47
ATOM   1267  CD  LYS A 164       5.608  64.642  39.612  1.00 87.95
ATOM   1268  CE  LYS A 164       6.869  64.557  38.757  1.00 94.83
ATOM   1269  NZ  LYS A 164       7.762  65.712  38.926  1.00100.00
ATOM   1270  N   GLU A 165       8.253  63.168  43.445  1.00 32.55
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ATOM   1271  CA  GLU A 165       9.540  63.587  43.946  1.00 33.95
ATOM   1272  C   GLU A 165      10.107  62.617  44.949  1.00 36.46
ATOM   1273  O   GLU A 165      11.245  62.742  45.348  1.00 36.58
ATOM   1274  CB  GLU A 165       9.510  65.006  44.540  1.00 37.35
ATOM   1275  CG  GLU A 165       8.599  65.165  45.784  1.00 53.54
ATOM   1276  CD  GLU A 165       7.138  65.409  45.480  1.00 77.59
ATOM   1277  OE1 GLU A 165       6.598  65.114  44.421  1.00 44.13
ATOM   1278  OE2 GLU A 165       6.512  65.959  46.494  1.00 78.66
ATOM   1279  N   LEU A 166       9.314  61.641  45.318  1.00 33.08
ATOM   1280  CA  LEU A 166       9.772  60.695  46.299  1.00 33.49
ATOM   1281  C   LEU A 166      10.068  59.321  45.734  1.00 40.05
ATOM   1282  O   LEU A 166       9.578  58.987  44.646  1.00 41.96
ATOM   1283  CB  LEU A 166       8.727  60.596  47.423  1.00 31.45
ATOM   1284  CG  LEU A 166       8.352  61.938  48.020  1.00 29.81
ATOM   1285  CD1 LEU A 166       7.242  61.711  49.041  1.00 27.01
ATOM   1286  CD2 LEU A 166       9.598  62.582  48.632  1.00 21.37
ATOM   1287  N   VAL A 167      10.874  58.544  46.500  1.00 30.67
ATOM   1288  CA  VAL A 167      11.238  57.178  46.138  1.00 29.31
ATOM   1289  C   VAL A 167      10.478  56.157  46.996  1.00 35.64
ATOM   1290  O   VAL A 167      10.216  56.385  48.183  1.00 32.65
ATOM   1291  CB  VAL A 167      12.721  56.904  46.304  1.00 30.60
ATOM   1292  CG1 VAL A 167      13.000  55.483  45.849  1.00 29.30
ATOM   1293  CG2 VAL A 167      13.562  57.880  45.521  1.00 31.04
ATOM   1294  N   ALA A 168      10.132  55.017  46.400  1.00 33.01
ATOM   1295  CA  ALA A 168       9.453  53.943  47.115  1.00 29.38
ATOM   1296  C   ALA A 168      10.289  52.685  46.978  1.00 36.90
ATOM   1297  O   ALA A 168      10.786  52.362  45.875  1.00 37.97
ATOM   1298  CB  ALA A 168       8.046  53.694  46.637  1.00 28.00
ATOM   1299  N   LEU A 169      10.482  51.997  48.110  1.00 28.52
ATOM   1300  CA  LEU A 169      11.256  50.769  48.139  1.00 24.26
ATOM   1301  C   LEU A 169      10.464  49.738  48.879  1.00 27.24
ATOM   1302  O   LEU A 169       9.694  50.071  49.786  1.00 25.74
ATOM   1303  CB  LEU A 169      12.615  50.908  48.841  1.00 24.31
ATOM   1304  CG  LEU A 169      13.525  51.974  48.250  1.00 28.56
ATOM   1305  CD1 LEU A 169      14.739  52.181  49.173  1.00 27.05
ATOM   1306  CD2 LEU A 169      13.993  51.550  46.852  1.00 27.25
ATOM   1307  N   MET A 170      10.649  48.480  48.486  1.00 26.02
ATOM   1308  CA  MET A 170       9.952  47.392  49.144  1.00 23.03
ATOM   1309  C   MET A 170      10.856  46.224  49.455  1.00 18.57
ATOM   1310  O   MET A 170      12.033  46.212  49.085  1.00 20.77
ATOM   1311  CB  MET A 170       8.712  46.943  48.371  1.00 24.60
ATOM   1312  CG  MET A 170       7.654  47.979  48.535  1.00 25.34
ATOM   1313  SD  MET A 170       6.105  47.419  47.869  1.00 28.58
ATOM   1314  CE  MET A 170       5.380  46.463  49.232  1.00 24.66
ATOM   1315  N   SER A 171      10.298  45.244  50.173  1.00 17.78
ATOM   1316  CA  SER A 171      11.062  44.069  50.482  1.00 16.80
ATOM   1317  C   SER A 171      10.905  43.128  49.265  1.00 26.03
ATOM   1318  O   SER A 171      10.389  42.018  49.344  1.00 25.31
ATOM   1319  CB  SER A 171      10.527  43.436  51.748  1.00 17.00
ATOM   1320  OG  SER A 171       9.130  43.207  51.625  1.00 20.17
ATOM   1321  N   ALA A 172      11.298  43.612  48.095  1.00 26.60
ATOM   1322  CA  ALA A 172      11.154  42.849  46.875  1.00 25.77
ATOM   1323  C   ALA A 172      12.153  43.339  45.860  1.00 32.28
ATOM   1324  O   ALA A 172      12.897  44.299  46.114  1.00 26.87
ATOM   1325  CB  ALA A 172       9.762  43.083  46.332  1.00 25.21
ATOM   1326  N   ILE A 173      12.180  42.678  44.700  1.00 30.44
ATOM   1327  CA  ILE A 173      13.107  43.110  43.661  1.00 29.54
ATOM   1328  C   ILE A 173      12.510  44.319  42.959  1.00 30.78
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ATOM   1329  O   ILE A 173      11.331  44.315  42.583  1.00 29.32
ATOM   1330  CB  ILE A 173      13.479  41.997  42.661  1.00 31.06
ATOM   1331  CG1 ILE A 173      14.210  40.874  43.388  1.00 28.42
ATOM   1332  CG2 ILE A 173      14.431  42.563  41.617  1.00 32.58
ATOM   1333  CD1 ILE A 173      15.604  41.286  43.851  1.00 33.22
ATOM   1334  N   ARG A 174      13.328  45.356  42.834  1.00 31.92
ATOM   1335  CA  ARG A 174      12.906  46.595  42.197  1.00 33.87
ATOM   1336  C   ARG A 174      12.582  46.236  40.785  1.00 39.44
ATOM   1337  O   ARG A 174      13.467  45.775  40.091  1.00 34.80
ATOM   1338  CB  ARG A 174      14.004  47.669  42.218  1.00 35.31
ATOM   1339  CG  ARG A 174      14.186  48.368  43.579  1.00 42.88
ATOM   1340  CD  ARG A 174      15.229  49.492  43.608  1.00 39.93
ATOM   1341  NE  ARG A 174      16.516  49.129  43.013  1.00 59.20
ATOM   1342  CZ  ARG A 174      17.329  49.992  42.407  1.00 92.36
ATOM   1343  NH1 ARG A 174      17.032  51.288  42.284  1.00100.00
ATOM   1344  NH2 ARG A 174      18.474  49.542  41.901  1.00 84.94
ATOM   1345  N   ASP A 175      11.324  46.397  40.406  1.00 44.29
ATOM   1346  CA  ASP A 175      10.850  46.070  39.076  1.00 48.46
ATOM   1347  C   ASP A 175      10.987  47.236  38.107  1.00 61.94
ATOM   1348  O   ASP A 175      11.709  47.177  37.124  1.00 69.21
ATOM   1349  CB  ASP A 175       9.401  45.553  39.111  1.00 52.28
ATOM   1350  CG  ASP A 175       9.079  44.536  38.041  1.00 76.56
ATOM   1351  OD1 ASP A 175       9.926  44.028  37.313  1.00 76.21
ATOM   1352  OD2 ASP A 175       7.788  44.270  37.964  1.00 85.33
ATOM   1353  N   GLY A 176      10.293  48.309  38.369  1.00 59.49
ATOM   1354  CA  GLY A 176      10.405  49.442  37.489  1.00 59.25
ATOM   1355  C   GLY A 176       9.723  50.662  38.055  1.00 62.28
ATOM   1356  O   GLY A 176       8.958  50.585  39.026  1.00 61.93
ATOM   1357  N   GLU A 177      10.028  51.784  37.418  1.00 56.86
ATOM   1358  CA  GLU A 177       9.473  53.070  37.772  1.00 56.20
ATOM   1359  C   GLU A 177       9.128  53.804  36.495  1.00 66.31
ATOM   1360  O   GLU A 177       9.865  53.745  35.499  1.00 67.90
ATOM   1361  CB  GLU A 177      10.411  53.926  38.645  1.00 55.46
ATOM   1362  CG  GLU A 177      11.304  54.835  37.783  1.00 54.29
ATOM   1363  CD  GLU A 177      11.996  55.940  38.534  1.00 73.05
ATOM   1364  OE1 GLU A 177      11.471  57.005  38.805  1.00 66.34
ATOM   1365  OE2 GLU A 177      13.242  55.657  38.817  1.00 54.79
ATOM   1366  N   THR A 178       7.997  54.483  36.541  1.00 63.56
ATOM   1367  CA  THR A 178       7.496  55.245  35.419  1.00 63.49
ATOM   1368  C   THR A 178       6.534  56.305  35.923  1.00 64.39
ATOM   1369  O   THR A 178       6.338  56.452  37.118  1.00 65.55
ATOM   1370  CB  THR A 178       6.737  54.290  34.479  1.00 79.55
ATOM   1371  OG1 THR A 178       6.206  55.012  33.376  1.00100.00
ATOM   1372  CG2 THR A 178       5.617  53.590  35.263  1.00 62.95
ATOM   1373  N   PRO A 179       5.919  57.042  35.013  1.00 56.32
ATOM   1374  CA  PRO A 179       4.958  58.025  35.406  1.00 51.92
ATOM   1375  C   PRO A 179       3.593  57.388  35.536  1.00 51.24
ATOM   1376  O   PRO A 179       3.192  56.586  34.698  1.00 51.46
ATOM   1377  CB  PRO A 179       4.942  59.054  34.282  1.00 53.51
ATOM   1378  CG  PRO A 179       6.214  58.838  33.470  1.00 59.43
ATOM   1379  CD  PRO A 179       6.905  57.628  34.060  1.00 56.49
ATOM   1380  N   ASP A 180       2.906  57.739  36.614  1.00 44.92
ATOM   1381  CA  ASP A 180       1.581  57.264  36.884  1.00 45.28
ATOM   1382  C   ASP A 180       0.780  57.912  35.799  1.00 62.22
ATOM   1383  O   ASP A 180       1.131  59.004  35.376  1.00 62.62
ATOM   1384  CB  ASP A 180       1.156  57.806  38.255  1.00 43.41
ATOM   1385  CG  ASP A 180      -0.212  57.380  38.679  1.00 48.40
ATOM   1386  OD1 ASP A 180      -1.073  56.997  37.904  1.00 53.37
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ATOM 1387 OD2 ASP A 180 -0.383 57.463 39.973 1.00 47.57
ATOM 1388 N PRO A 181 -0.243 57.280 35.296 1.00 69.44
ATOM 1389 CA PRO A 181 -0.950 57.955 34.234 1.00 72.53
ATOM 1390 C PRO A 181 -2.382 58.272 34.587 1.00 82.99
ATOM 1391 O PRO A 181 -3.231 58.459 33.717 1.00 84.95
ATOM 1392 CB PRO A 181 -0.829 57.076 32.987 1.00 74.39
ATOM 1393 CG PRO A 181 0.153 55.954 33.319 1.00 77.89
ATOM 1394 CD PRO A 181 0.458 56.057 34.810 1.00 71.93
ATOM 1395 N GLU A 182 -2.632 58.382 35.887 1.00 83.47
ATOM 1396 CA GLU A 182 -3.961 58.676 36.386 1.00 86.24
ATOM 1397 C GLU A 182 -4.259 60.167 36.436 1.00 98.16
ATOM 1398 O GLU A 182 -4.003 60.882 35.460 1.00100.00
ATOM 1399 CB GLU A 182 -4.278 57.994 37.726 1.00 87.28
ATOM 1400 CG GLU A 182 -5.779 57.681 37.863 1.00 90.17
ATOM 1401 CD GLU A 182 -6.257 56.682 36.842 1.00100.00
ATOM 1402 OE1 GLU A 182 -6.233 56.882 35.637 1.00100.00
ATOM 1403 OE2 GLU A 182 -6.718 55.578 37.385 1.00100.00
ATOM 1404 N ASP A 183 -4.767 60.640 37.598 1.00 96.59
ATOM 1405 CA ASP A 183 -5.124 62.060 37.848 1.00 97.69
ATOM 1406 C ASP A 183 -4.078 62.809 38.721 1.00100.00
ATOM 1407 O ASP A 183 -4.439 63.829 39.375 1.00100.00
ATOM 1408 CB ASP A 183 -6.477 62.127 38.653 1.00 99.62
ATOM 1409 CG ASP A 183 -7.712 61.432 38.090 1.00100.00
ATOM 1410 OD1 ASP A 183 -8.310 60.544 38.680 1.00100.00
ATOM 1411 OD2 ASP A 183 -8.091 61.903 36.918 1.00100.00
ATOM 1412 N PRO A 184 -2.797 62.341 38.750 1.00 95.70
ATOM 1413 CA PRO A 184 -1.734 62.796 39.641 1.00 94.16
ATOM 1414 C PRO A 184 -0.516 63.593 39.206 1.00 96.46
ATOM 1415 O PRO A 184 -0.294 63.958 38.050 1.00 99.66
ATOM 1416 CB PRO A 184 -0.980 61.479 39.654 1.00 95.77
ATOM 1417 CG PRO A 184 -0.835 61.166 38.163 1.00 99.25
ATOM 1418 CD PRO A 184 -2.085 61.763 37.565 1.00 94.91
ATOM 1419 N SER A 185 0.318 63.703 40.258 1.00 86.69
ATOM 1420 CA SER A 185 1.658 64.262 40.362 1.00 82.33
ATOM 1421 C SER A 185 2.434 63.253 41.219 1.00 77.73
ATOM 1422 O SER A 185 3.198 63.570 42.144 1.00 79.49
ATOM 1423 CB SER A 185 1.710 65.661 40.921 1.00 85.04
ATOM 1424 OG SER A 185 2.756 66.349 40.263 1.00 97.98
ATOM 1425 N ARG A 186 2.121 61.994 40.856 1.00 62.61
ATOM 1426 CA ARG A 186 2.591 60.741 41.404 1.00 55.55
ATOM 1427 C ARG A 186 3.444 59.990 40.366 1.00 56.85
ATOM 1428 O ARG A 186 3.354 60.216 39.158 1.00 56.42
ATOM 1429 CB ARG A 186 1.388 59.859 41.742 1.00 41.52
ATOM 1430 CG ARG A 186 0.432 60.389 42.805 1.00 32.21
ATOM 1431 CD ARG A 186 0.602 59.683 44.153 1.00 42.93
ATOM 1432 NE ARG A 186 -0.519 59.935 45.043 1.00 79.86
ATOM 1433 CZ ARG A 186 -0.467 60.731 46.113 1.00100.00
ATOM 1434 NH1 ARG A 186 0.659 61.360 46.468 1.00100.00
ATOM 1435 NH2 ARG A 186 -1.566 60.880 46.860 1.00100.00
ATOM 1436 N LYS A 187 4.273 59.078 40.867 1.00 47.78
ATOM 1437 CA LYS A 187 5.164 58.231 40.095 1.00 44.24
ATOM 1438 C LYS A 187 4.856 56.802 40.532 1.00 50.17
ATOM 1439 O LYS A 187 4.464 56.573 41.684 1.00 49.60
ATOM 1440 CB LYS A 187 6.604 58.608 40.417 1.00 45.31
ATOM 1441 CG LYS A 187 7.703 57.832 39.706 1.00 37.40
ATOM 1442 CD LYS A 187 9.099 58.045 40.318 1.00 37.61
ATOM 1443 CE LYS A 187 9.919 59.196 39.732 1.00 27.19
ATOM 1444 NZ LYS A 187 11.371 59.057 39.898 1.00 40.78

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ATOM   1445  N   ILE A 188       5.006  55.832  39.620  1.00 46.34
ATOM   1446  CA  ILE A 188       4.732  54.438  39.963  1.00 43.89
ATOM   1447  C   ILE A 188       5.884  53.438  40.044  1.00 45.27
ATOM   1448  O   ILE A 188       6.596  53.147  39.068  1.00 42.03
ATOM   1449  CB  ILE A 188       3.357  53.861  39.782  1.00 46.49
ATOM   1450  CG1 ILE A 188       3.571  52.427  39.378  1.00 46.61
ATOM   1451  CG2 ILE A 188       2.528  54.603  38.744  1.00 45.69
ATOM   1452  CD1 ILE A 188       2.888  51.492  40.354  1.00 66.60
ATOM   1453  N   TYR A 189       6.055  52.933  41.277  1.00 39.79
ATOM   1454  CA  TYR A 189       7.108  52.024  41.630  1.00 36.01
ATOM   1455  C   TYR A 189       6.634  50.615  41.665  1.00 36.02
ATOM   1456  O   TYR A 189       5.632  50.291  42.321  1.00 36.41
ATOM   1457  CB  TYR A 189       7.766  52.446  42.952  1.00 37.07
ATOM   1458  CG  TYR A 189       8.644  53.677  42.783  1.00 36.77
ATOM   1459  CD1 TYR A 189       9.904  53.567  42.197  1.00 39.01
ATOM   1460  CD2 TYR A 189       8.216  54.942  43.193  1.00 34.62
ATOM   1461  CE1 TYR A 189      10.733  54.675  42.029  1.00 41.28
ATOM   1462  CE2 TYR A 189       9.023  56.067  43.031  1.00 33.53
ATOM   1463  CZ  TYR A 189      10.279  55.927  42.441  1.00 44.38
ATOM   1464  OH  TYR A 189      11.084  57.022  42.277  1.00 44.92
ATOM   1465  N   LYS A 190       7.395  49.801  40.929  1.00 35.47
ATOM   1466  CA  LYS A 190       7.125  48.373  40.772  1.00 36.67
ATOM   1467  C   LYS A 190       8.131  47.441  41.475  1.00 32.16
ATOM   1468  O   LYS A 190       9.337  47.667  41.471  1.00 30.99
ATOM   1469  CB  LYS A 190       6.872  47.992  39.310  1.00 39.45
ATOM   1470  CG  LYS A 190       5.457  48.328  38.833  1.00 44.38
ATOM   1471  CD  LYS A 190       5.417  49.126  37.539  1.00 56.65
ATOM   1472  CE  LYS A 190       5.539  48.274  36.282  1.00 73.04
ATOM   1473  NZ  LYS A 190       6.686  48.658  35.433  1.00 92.77
ATOM   1474  N   PHE A 191       7.592  46.380  42.076  1.00 27.93
ATOM   1475  CA  PHE A 191       8.393  45.421  42.812  1.00 25.63
ATOM   1476  C   PHE A 191       7.916  43.986  42.679  1.00 25.33
ATOM   1477  O   PHE A 191       6.708  43.667  42.633  1.00 24.55
ATOM   1478  CB  PHE A 191       8.281  45.779  44.306  1.00 27.49
ATOM   1479  CG  PHE A 191       8.548  47.238  44.618  1.00 26.47
ATOM   1480  CD1 PHE A 191       9.838  47.668  44.922  1.00 27.21
ATOM   1481  CD2 PHE A 191       7.508  48.167  44.619  1.00 27.67
ATOM   1482  CE1 PHE A 191      10.086  49.004  45.223  1.00 28.50
ATOM   1483  CE2 PHE A 191       7.739  49.510  44.909  1.00 29.86
ATOM   1484  CZ  PHE A 191       9.038  49.923  45.205  1.00 28.47
ATOM   1485  N   ILE A 192       8.868  43.076  42.700  1.00 26.53
ATOM   1486  CA  ILE A 192       8.485  41.669  42.616  1.00 30.09
ATOM   1487  C   ILE A 192       9.228  40.779  43.609  1.00 26.87
ATOM   1488  O   ILE A 192      10.446  40.810  43.711  1.00 23.15
ATOM   1489  CB  ILE A 192       8.661  41.088  41.208  1.00 36.97
ATOM   1490  CG1 ILE A 192      10.132  40.970  40.936  1.00 39.49
ATOM   1491  CG2 ILE A 192       8.036  41.938  40.104  1.00 38.69
ATOM   1492  CD1 ILE A 192      10.620  39.563  41.245  1.00 73.45
ATOM   1493  N   GLN A 193       8.481  39.967  44.331  1.00 25.43
ATOM   1494  CA  GLN A 193       9.095  39.055  45.295  1.00 24.94
ATOM   1495  C   GLN A 193       8.684  37.626  44.993  1.00 25.94
ATOM   1496  O   GLN A 193       7.590  37.181  45.376  1.00 25.03
ATOM   1497  CB  GLN A 193       8.808  39.412  46.772  1.00 24.11
ATOM   1498  CG  GLN A 193       9.426  38.422  47.782  1.00 17.67
ATOM   1499  CD  GLN A 193      10.947  38.402  47.777  1.00 23.92
ATOM   1500  OE1 GLN A 193      11.568  37.485  47.248  1.00 24.84
ATOM   1501  NE2 GLN A 193      11.568  39.376  48.394  1.00 21.35
ATOM   1502  N   LYS A 194       9.611  36.945  44.296  1.00 24.59
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ATOM 1503 CA LYS A 194 9.486 35.548 43.842 1.00 26.30
ATOM 1504 C LYS A 194 9.677 34.457 44.943 1.00 33.55
ATOM 1505 O LYS A 194 9.254 33.305 44.759 1.00 33.23
ATOM 1506 CB LYS A 194 10.379 35.289 42.612 1.00 26.74
ATOM 1507 CG LYS A 194 9.722 35.609 41.258 1.00 39.96
ATOM 1508 CD LYS A 194 10.697 36.137 40.199 1.00 47.00
ATOM 1509 CE LYS A 194 10.182 36.110 38.751 1.00 59.13
ATOM 1510 NZ LYS A 194 11.226 35.798 37.746 1.00 54.07
ATOM 1511 N VAL A 195 10.332 34.795 46.076 1.00 25.61
ATOM 1512 CA VAL A 195 10.542 33.829 47.155 1.00 23.02
ATOM 1513 C VAL A 195 9.385 33.947 48.108 1.00 27.87
ATOM 1514 O VAL A 195 9.099 35.029 48.566 1.00 29.77
ATOM 1515 CB VAL A 195 11.833 34.049 47.930 1.00 22.42
ATOM 1516 CG1 VAL A 195 11.997 32.891 48.881 1.00 22.09
ATOM 1517 CG2 VAL A 195 13.057 34.101 47.027 1.00 21.83
ATOM 1518 N PRO A 196 8.687 32.867 48.391 1.00 24.28
ATOM 1519 CA PRO A 196 7.572 32.955 49.297 1.00 22.68
ATOM 1520 C PRO A 196 8.042 33.362 50.704 1.00 27.58
ATOM 1521 O PRO A 196 9.027 32.837 51.244 1.00 25.38
ATOM 1522 CB PRO A 196 6.886 31.588 49.301 1.00 24.52
ATOM 1523 CG PRO A 196 7.686 30.674 48.397 1.00 28.81
ATOM 1524 CD PRO A 196 8.822 31.497 47.831 1.00 24.64
ATOM 1525 N ILE A 197 7.339 34.328 51.287 1.00 22.20
ATOM 1526 CA ILE A 197 7.713 34.810 52.578 1.00 19.62
ATOM 1527 C ILE A 197 6.498 35.005 53.418 1.00 24.85
ATOM 1528 O ILE A 197 5.391 35.163 52.919 1.00 20.49
ATOM 1529 CB ILE A 197 8.307 36.176 52.383 1.00 21.90
ATOM 1530 CG1 ILE A 197 7.317 36.930 51.510 1.00 23.26
ATOM 1531 CG2 ILE A 197 9.662 36.133 51.681 1.00 22.57
ATOM 1532 CD1 ILE A 197 7.442 38.455 51.650 1.00 28.64
ATOM 1533 N PRO A 198 6.725 35.020 54.727 1.00 22.95
ATOM 1534 CA PRO A 198 5.660 35.263 55.686 1.00 20.55
ATOM 1535 C PRO A 198 5.308 36.740 55.535 1.00 24.13
ATOM 1536 O PRO A 198 6.192 37.511 55.197 1.00 24.11
ATOM 1537 CB PRO A 198 6.286 35.001 57.046 1.00 20.69
ATOM 1538 CG PRO A 198 7.782 34.882 56.848 1.00 24.39
ATOM 1539 CD PRO A 198 8.046 34.830 55.359 1.00 21.23
ATOM 1540 N CYS A 199 4.029 37.129 55.721 1.00 22.42
ATOM 1541 CA CYS A 199 3.597 38.521 55.530 1.00 23.29
ATOM 1542 C CYS A 199 4.310 39.559 56.408 1.00 27.78
ATOM 1543 O CYS A 199 4.378 40.752 56.060 1.00 25.00
ATOM 1544 CB CYS A 199 2.079 38.691 55.499 1.00 24.93
ATOM 1545 SG CYS A 199 1.319 38.281 57.082 1.00 31.80
ATOM 1546 N TYR A 200 4.880 39.106 57.542 1.00 21.98
ATOM 1547 CA TYR A 200 5.590 40.062 58.390 1.00 19.50
ATOM 1548 C TYR A 200 6.812 40.615 57.730 1.00 21.02
ATOM 1549 O TYR A 200 7.392 41.585 58.195 1.00 19.63
ATOM 1550 CB TYR A 200 5.927 39.555 59.788 1.00 19.66
ATOM 1551 CG TYR A 200 7.021 38.532 59.828 1.00 19.06
ATOM 1552 CD1 TYR A 200 8.354 38.928 59.994 1.00 21.18
ATOM 1553 CD2 TYR A 200 6.719 37.172 59.825 1.00 21.09
ATOM 1554 CE1 TYR A 200 9.386 37.993 60.025 1.00 16.13
ATOM 1555 CE2 TYR A 200 7.737 36.217 59.949 1.00 20.99
ATOM 1556 CZ TYR A 200 9.063 36.634 60.015 1.00 20.66
ATOM 1557 OH TYR A 200 10.067 35.708 60.098 1.00 19.92
ATOM 1558 N LEU A 201 7.211 39.993 56.640 1.00 15.20
ATOM 1559 CA LEU A 201 8.366 40.433 55.883 1.00 15.14
ATOM 1560 C LEU A 201 8.004 41.402 54.749 1.00 21.51

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ATOM   1561  O   LEU A 201       8.840  41.791  53.934  1.00 21.66
ATOM   1562  CB  LEU A 201       9.177  39.235  55.381  1.00 16.83
ATOM   1563  CG  LEU A 201       9.786  38.370  56.484  1.00 18.02
ATOM   1564  CD1 LEU A 201      10.522  37.230  55.803  1.00 19.59
ATOM   1565  CD2 LEU A 201      10.792  39.169  57.271  1.00 14.71
ATOM   1566  N   ILE A 202       6.733  41.795  54.687  1.00 21.47
ATOM   1567  CA  ILE A 202       6.283  42.764  53.681  1.00 21.65
ATOM   1568  C   ILE A 202       6.660  44.150  54.204  1.00 26.05
ATOM   1569  O   ILE A 202       6.278  44.529  55.321  1.00 23.20
ATOM   1570  CB  ILE A 202       4.780  42.726  53.439  1.00 24.75
ATOM   1571  CG1 ILE A 202       4.373  41.403  52.800  1.00 23.39
ATOM   1572  CG2 ILE A 202       4.437  43.900  52.512  1.00 28.50
ATOM   1573  CD1 ILE A 202       2.864  41.172  52.728  1.00 31.47
ATOM   1574  N   ALA A 203       7.427  44.894  53.431  1.00 19.73
ATOM   1575  CA  ALA A 203       7.855  46.204  53.877  1.00 22.65
ATOM   1576  C   ALA A 203       7.838  47.244  52.757  1.00 25.87
ATOM   1577  O   ALA A 203       8.068  46.955  51.585  1.00 23.99
ATOM   1578  CB  ALA A 203       9.258  46.153  54.511  1.00 23.47
ATOM   1579  N   LEU A 204       7.607  48.474  53.198  1.00 19.67
ATOM   1580  CA  LEU A 204       7.538  49.632  52.347  1.00 18.99
ATOM   1581  C   LEU A 204       8.093  50.857  53.051  1.00 23.68
ATOM   1582  O   LEU A 204       7.893  51.074  54.253  1.00 21.71
ATOM   1583  CB  LEU A 204       6.061  49.879  51.935  1.00 18.01
ATOM   1584  CG  LEU A 204       5.814  51.197  51.176  1.00 23.52
ATOM   1585  CD1 LEU A 204       6.230  51.125  49.697  1.00 21.41
ATOM   1586  CD2 LEU A 204       4.345  51.563  51.285  1.00 21.73
ATOM   1587  N   VAL A 205       8.786  51.648  52.258  1.00 22.72
ATOM   1588  CA  VAL A 205       9.348  52.893  52.693  1.00 21.77
ATOM   1589  C   VAL A 205       9.200  53.882  51.559  1.00 26.12
ATOM   1590  O   VAL A 205       9.508  53.568  50.406  1.00 24.95
ATOM   1591  CB  VAL A 205      10.812  52.781  53.027  1.00 25.95
ATOM   1592  CG1 VAL A 205      11.521  52.212  51.803  1.00 26.40
ATOM   1593  CG2 VAL A 205      11.340  54.192  53.317  1.00 27.95
ATOM   1594  N   VAL A 206       8.732  55.066  51.880  1.00 20.44
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ATOM 1595 CA VAL A 206 8.576 56.105 50.858 1.00 21.96
ATOM 1596 C VAL A 206 9.265 57.379 51.324 1.00 28.78
ATOM 1597 O VAL A 206 9.008 57.824 52.447 1.00 28.18
ATOM 1598 CB VAL A 206 7.109 56.389 50.536 1.00 23.95
ATOM 1599 CG1 VAL A 206 7.004 57.493 49.488 1.00 25.31
ATOM 1600 CG2 VAL A 206 6.442 55.118 50.037 1.00 23.22
ATOM 1601 N GLY A 207 10.139 57.941 50.498 1.00 25.04
ATOM 1602 CA GLY A 207 10.797 59.159 50.914 1.00 26.83
ATOM 1603 C GLY A 207 11.775 59.691 49.899 1.00 28.05
ATOM 1604 O GLY A 207 11.859 59.189 48.780 1.00 29.36
ATOM 1605 N ALA A 208 12.502 60.711 50.346 1.00 26.69
ATOM 1606 CA ALA A 208 13.536 61.410 49.578 1.00 29.20
ATOM 1607 C ALA A 208 14.846 60.654 49.687 1.00 31.12
ATOM 1608 O ALA A 208 15.796 61.079 50.353 1.00 29.49
ATOM 1609 CB ALA A 208 13.684 62.841 50.104 1.00 30.49
ATOM 1610 N LEU A 209 14.856 59.514 49.014 1.00 28.20
ATOM 1611 CA LEU A 209 15.963 58.592 49.036 1.00 28.72
ATOM 1612 C LEU A 209 17.012 58.709 47.959 1.00 38.13
ATOM 1613 O LEU A 209 16.751 58.982 46.799 1.00 42.08
ATOM 1614 CB LEU A 209 15.453 57.135 49.139 1.00 26.94
ATOM 1615 CG LEU A 209 14.440 57.028 50.261 1.00 31.37
ATOM 1616 CD1 LEU A 209 13.636 55.747 50.154 1.00 33.38
ATOM 1617 CD2 LEU A 209 15.188 57.065 51.581 1.00 30.28
ATOM 1618 N GLU A 210 18.212 58.437 48.418 1.00 32.71
ATOM 1619 CA GLU A 210 19.403 58.405 47.650 1.00 31.96
ATOM 1620 C GLU A 210 20.080 57.121 48.033 1.00 37.22
ATOM 1621 O GLU A 210 19.837 56.606 49.126 1.00 34.80
ATOM 1622 CB GLU A 210 20.295 59.616 47.927 1.00 32.87
ATOM 1623 CG GLU A 210 19.833 60.822 47.107 1.00 44.60
ATOM 1624 CD GLU A 210 20.785 61.953 47.229 1.00 82.71
ATOM 1625 OE1 GLU A 210 21.889 61.829 47.732 1.00 73.15
ATOM 1626 OE2 GLU A 210 20.295 63.072 46.753 1.00100.00
ATOM 1627 N SER A 211 20.877 56.614 47.105 1.00 35.47
ATOM 1628 CA SER A 211 21.581 55.369 47.253 1.00 34.32
ATOM 1629 C SER A 211 23.045 55.490 46.911 1.00 39.68
ATOM 1630 O SER A 211 23.478 56.390 46.219 1.00 45.50
ATOM 1631 CB SER A 211 20.922 54.288 46.378 1.00 38.13
ATOM 1632 OG SER A 211 21.157 54.494 44.982 1.00 40.31
ATOM 1633 N ARG A 212 23.819 54.569 47.381 1.00 30.48
ATOM 1634 CA ARG A 212 25.210 54.541 47.065 1.00 29.53
ATOM 1635 C ARG A 212 25.507 53.063 46.924 1.00 35.68
ATOM 1636 O ARG A 212 25.101 52.275 47.774 1.00 35.76
ATOM 1637 CB ARG A 212 26.043 55.203 48.147 1.00 32.65
ATOM 1638 CG ARG A 212 27.304 55.851 47.600 1.00 56.68
ATOM 1639 CD ARG A 212 27.035 57.020 46.647 1.00 73.87
ATOM 1640 NE ARG A 212 26.884 58.345 47.270 1.00 68.27
ATOM 1641 CZ ARG A 212 25.863 59.200 47.037 1.00 85.21
ATOM 1642 NH1 ARG A 212 24.847 58.918 46.205 1.00 40.25
ATOM 1643 NH2 ARG A 212 25.860 60.383 47.666 1.00 87.08
ATOM 1644 N GLN A 213 26.137 52.645 45.851 1.00 28.72
ATOM 1645 CA GLN A 213 26.400 51.238 45.722 1.00 29.18
ATOM 1646 C GLN A 213 27.663 50.855 46.475 1.00 34.58
ATOM 1647 O GLN A 213 28.716 51.434 46.220 1.00 36.75
ATOM 1648 CB GLN A 213 26.487 50.838 44.251 1.00 30.88
ATOM 1649 CG GLN A 213 26.268 49.331 44.057 1.00 42.35
ATOM 1650 CD GLN A 213 26.898 48.872 42.780 1.00 61.33
ATOM 1651 OE1 GLN A 213 27.585 47.845 42.754 1.00 55.13
ATOM 1652 NE2 GLN A 213 26.679 49.658 41.724 1.00 65.90

ATOM	1653	N	ILE	A	214	27.553	49.880	47.413	1.00 28.70
ATOM	1654	CA	ILE	A	214	28.697	49.455	48.202	1.00 25.96
ATOM	1655	C	ILE	A	214	29.065	48.017	47.970	1.00 29.90
ATOM	1656	O	ILE	A	214	29.925	47.468	48.651	1.00 30.32
ATOM	1657	CB	ILE	A	214	28.495	49.694	49.685	1.00 27.31
ATOM	1658	CG1	ILE	A	214	27.292	48.905	50.161	1.00 27.09
ATOM	1659	CG2	ILE	A	214	28.191	51.159	49.913	1.00 28.84
ATOM	1660	CD1	ILE	A	214	27.092	49.010	51.667	1.00 24.71
ATOM	1661	N	GLY	A	215	28.393	47.400	47.020	1.00 27.12
ATOM	1662	CA	GLY	A	215	28.660	45.988	46.697	1.00 28.78
ATOM	1663	C	GLY	A	215	27.921	45.548	45.441	1.00 33.65
ATOM	1664	O	GLY	A	215	26.945	46.193	45.060	1.00 37.47
ATOM	1665	N	PRO	A	216	28.375	44.451	44.813	1.00 31.69
ATOM	1666	CA	PRO	A	216	27.777	43.940	43.596	1.00 31.17
ATOM	1667	C	PRO	A	216	26.293	43.725	43.726	1.00 34.01
ATOM	1668	O	PRO	A	216	25.549	43.848	42.762	1.00 37.18
ATOM	1669	CB	PRO	A	216	28.441	42.615	43.281	1.00 32.10
ATOM	1670	CG	PRO	A	216	29.337	42.292	44.453	1.00 36.37
ATOM	1671	CD	PRO	A	216	29.255	43.453	45.426	1.00 31.79
ATOM	1672	N	ARG	A	217	25.856	43.409	44.918	1.00 23.91
ATOM	1673	CA	ARG	A	217	24.440	43.187	45.108	1.00 24.07
ATOM	1674	C	ARG	A	217	23.912	44.068	46.225	1.00 31.39
ATOM	1675	O	ARG	A	217	22.863	43.803	46.826	1.00 30.65
ATOM	1676	CB	ARG	A	217	24.150	41.717	45.382	1.00 26.69
ATOM	1677	CG	ARG	A	217	25.327	40.950	46.011	1.00 38.32
ATOM	1678	CD	ARG	A	217	24.955	39.534	46.476	1.00 26.86
ATOM	1679	NE	ARG	A	217	26.022	38.855	47.227	1.00 27.11
ATOM	1680	CZ	ARG	A	217	26.038	37.550	47.494	1.00 36.87
ATOM	1681	NH1	ARG	A	217	25.070	36.732	47.082	1.00 29.90
ATOM	1682	NH2	ARG	A	217	27.053	37.051	48.188	1.00 34.57
ATOM	1683	N	THR	A	218	24.669	45.121	46.503	1.00 24.92
ATOM	1684	CA	THR	A	218	24.283	45.994	47.561	1.00 24.28
ATOM	1685	C	THR	A	218	24.407	47.495	47.295	1.00 33.11
ATOM	1686	O	THR	A	218	25.462	48.009	46.938	1.00 32.08
ATOM	1687	CB	THR	A	218	25.099	45.694	48.842	1.00 25.29
ATOM	1688	OG1	THR	A	218	25.110	44.320	49.114	1.00 29.80
ATOM	1689	CG2	THR	A	218	24.550	46.489	50.042	1.00 19.82
ATOM	1690	N	LEU	A	219	23.294	48.168	47.577	1.00 30.26
ATOM	1691	CA	LEU	A	219	23.138	49.593	47.547	1.00 30.69
ATOM	1692	C	LEU	A	219	22.755	50.013	48.964	1.00 35.22
ATOM	1693	O	LEU	A	219	22.157	49.227	49.717	1.00 33.12
ATOM	1694	CB	LEU	A	219	21.963	49.979	46.668	1.00 31.36
ATOM	1695	CG	LEU	A	219	22.394	50.547	45.344	1.00 35.12
ATOM	1696	CD1	LEU	A	219	23.295	49.545	44.652	1.00 36.05
ATOM	1697	CD2	LEU	A	219	21.135	50.798	44.548	1.00 32.80
ATOM	1698	N	VAL	A	220	23.089	51.251	49.315	1.00 33.70
ATOM	1699	CA	VAL	A	220	22.738	51.837	50.597	1.00 33.58
ATOM	1700	C	VAL	A	220	21.790	52.940	50.279	1.00 35.57
ATOM	1701	O	VAL	A	220	22.097	53.756	49.429	1.00 34.74
ATOM	1702	CB	VAL	A	220	23.874	52.503	51.357	1.00 38.98
ATOM	1703	CG1	VAL	A	220	23.695	52.251	52.848	1.00 37.14
ATOM	1704	CG2	VAL	A	220	25.228	52.020	50.860	1.00 41.00
ATOM	1705	N	TRP	A	221	20.664	52.958	50.956	1.00 29.92
ATOM	1706	CA	TRP	A	221	19.675	53.989	50.747	1.00 29.02
ATOM	1707	C	TRP	A	221	19.466	54.775	52.008	1.00 31.38
ATOM	1708	O	TRP	A	221	19.437	54.232	53.115	1.00 29.61
ATOM	1709	CB	TRP	A	221	18.325	53.351	50.420	1.00 26.55
ATOM	1710	CG	TRP	A	221	18.371	52.586	49.153	1.00 27.34

ATOM 1711 CD1 TRP A 221 18.817 51.334 48.993 1.00 29.93
ATOM 1712 CD2 TRP A 221 17.949 53.044 47.866 1.00 28.26
ATOM 1713 NE1 TRP A 221 18.686 50.951 47.687 1.00 28.94
ATOM 1714 CE2 TRP A 221 18.158 51.980 46.969 1.00 31.62
ATOM 1715 CE3 TRP A 221 17.404 54.250 47.397 1.00 29.01
ATOM 1716 CZ2 TRP A 221 17.841 52.093 45.616 1.00 31.03
ATOM 1717 CZ3 TRP A 221 17.093 54.351 46.059 1.00 29.62
ATOM 1718 CH2 TRP A 221 17.319 53.284 45.177 1.00 29.13
ATOM 1719 N SER A 222 19.277 56.047 51.843 1.00 27.55
ATOM 1720 CA SER A 222 19.002 56.889 52.991 1.00 28.55
ATOM 1721 C SER A 222 18.770 58.317 52.528 1.00 37.74
ATOM 1722 O SER A 222 18.945 58.649 51.341 1.00 36.03
ATOM 1723 CB SER A 222 20.012 56.786 54.145 1.00 25.75
ATOM 1724 OG SER A 222 21.148 57.591 53.888 1.00 32.66
ATOM 1725 N GLU A 223 18.423 59.174 53.446 1.00 30.01
ATOM 1726 CA GLU A 223 18.297 60.498 52.991 1.00 28.87
ATOM 1727 C GLU A 223 19.713 60.922 52.600 1.00 34.38
ATOM 1728 O GLU A 223 20.731 60.373 53.065 1.00 29.90
ATOM 1729 CB GLU A 223 17.732 61.411 54.081 1.00 29.74
ATOM 1730 CG GLU A 223 16.184 61.485 54.050 1.00 36.16
ATOM 1731 CD GLU A 223 15.638 62.563 54.967 1.00 64.35
ATOM 1732 OE1 GLU A 223 15.376 63.690 54.583 1.00 29.91
ATOM 1733 OE2 GLU A 223 15.465 62.169 56.219 1.00 46.08
ATOM 1734 N LYS A 224 19.765 61.913 51.722 1.00 33.08
ATOM 1735 CA LYS A 224 21.006 62.468 51.231 1.00 32.76
ATOM 1736 C LYS A 224 22.054 62.700 52.335 1.00 31.27
ATOM 1737 O LYS A 224 23.257 62.463 52.195 1.00 29.06
ATOM 1738 CB LYS A 224 20.655 63.795 50.547 1.00 36.11
ATOM 1739 CG LYS A 224 21.845 64.676 50.237 1.00 70.27
ATOM 1740 CD LYS A 224 21.558 65.670 49.112 1.00 95.60
ATOM 1741 CE LYS A 224 22.191 65.293 47.774 1.00100.00
ATOM 1742 NZ LYS A 224 21.521 65.907 46.613 1.00100.00
ATOM 1743 N GLU A 225 21.595 63.197 53.449 1.00 27.65
ATOM 1744 CA GLU A 225 22.466 63.510 54.560 1.00 30.22
ATOM 1745 C GLU A 225 23.173 62.347 55.232 1.00 34.65
ATOM 1746 O GLU A 225 24.093 62.573 56.012 1.00 32.34
ATOM 1747 CB GLU A 225 21.691 64.278 55.645 1.00 31.76
ATOM 1748 CG GLU A 225 21.276 65.694 55.193 1.00 42.16
ATOM 1749 CD GLU A 225 19.998 65.742 54.394 1.00 65.10
ATOM 1750 OE1 GLU A 225 19.395 66.779 54.196 1.00 45.97
ATOM 1751 OE2 GLU A 225 19.599 64.571 53.932 1.00 45.63
ATOM 1752 N GLN A 226 22.752 61.120 54.973 1.00 33.60
ATOM 1753 CA GLN A 226 23.388 60.001 55.655 1.00 34.29
ATOM 1754 C GLN A 226 24.119 58.992 54.747 1.00 37.04
ATOM 1755 O GLN A 226 24.817 58.061 55.198 1.00 30.70
ATOM 1756 CB GLN A 226 22.319 59.313 56.529 1.00 35.21
ATOM 1757 CG GLN A 226 22.053 60.029 57.866 1.00 34.89
ATOM 1758 CD GLN A 226 21.280 61.349 57.783 1.00 40.09
ATOM 1759 OE1 GLN A 226 21.713 62.359 58.344 1.00 40.30
ATOM 1760 NE2 GLN A 226 20.114 61.346 57.153 1.00 27.20
ATOM 1761 N VAL A 227 23.964 59.180 53.451 1.00 37.01
ATOM 1762 CA VAL A 227 24.569 58.285 52.468 1.00 38.78
ATOM 1763 C VAL A 227 26.052 57.969 52.615 1.00 39.63
ATOM 1764 O VAL A 227 26.459 56.809 52.699 1.00 39.37
ATOM 1765 CB VAL A 227 24.259 58.730 51.039 1.00 45.58
ATOM 1766 CG1 VAL A 227 25.230 58.083 50.063 1.00 44.41
ATOM 1767 CG2 VAL A 227 22.842 58.321 50.671 1.00 47.37
ATOM 1768 N GLU A 228 26.869 59.005 52.563 1.00 31.40

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ATOM   1769  CA  GLU A 228      28.291  58.805  52.664  1.00 32.15
ATOM   1770  C   GLU A 228      28.689  57.981  53.870  1.00 36.09
ATOM   1771  O   GLU A 228      29.400  56.995  53.735  1.00 33.16
ATOM   1772  CB  GLU A 228      29.031  60.144  52.584  1.00 34.27
ATOM   1773  CG  GLU A 228      28.993  60.704  51.145  1.00 69.42
ATOM   1774  CD  GLU A 228      29.273  59.645  50.108  1.00 98.31
ATOM   1775  OE1 GLU A 228      30.359  59.101  50.017  1.00 94.37
ATOM   1776  OE2 GLU A 228      28.238  59.362  49.343  1.00 74.62
ATOM   1777  N   LYS A 229      28.202  58.433  55.044  1.00 33.36
ATOM   1778  CA  LYS A 229      28.419  57.808  56.348  1.00 30.47
ATOM   1779  C   LYS A 229      27.897  56.378  56.335  1.00 27.55
ATOM   1780  O   LYS A 229      28.545  55.446  56.780  1.00 28.17
ATOM   1781  CB  LYS A 229      27.650  58.563  57.415  1.00 31.12
ATOM   1782  CG  LYS A 229      28.477  59.545  58.209  1.00 55.25
ATOM   1783  CD  LYS A 229      27.835  59.871  59.550  1.00 64.16
ATOM   1784  CE  LYS A 229      28.242  58.886  60.642  1.00 63.01
ATOM   1785  NZ  LYS A 229      29.694  58.883  60.899  1.00 59.75
ATOM   1786  N   SER A 230      26.700  56.201  55.838  1.00 22.45
ATOM   1787  CA  SER A 230      26.198  54.864  55.798  1.00 22.46
ATOM   1788  C   SER A 230      27.053  54.034  54.872  1.00 27.74
ATOM   1789  O   SER A 230      27.407  52.894  55.125  1.00 24.67
ATOM   1790  CB  SER A 230      24.806  54.881  55.263  1.00 23.20
ATOM   1791  OG  SER A 230      24.116  55.844  56.004  1.00 35.82
ATOM   1792  N   ALA A 231      27.371  54.626  53.759  1.00 26.64
ATOM   1793  CA  ALA A 231      28.173  53.922  52.803  1.00 28.26
ATOM   1794  C   ALA A 231      29.482  53.482  53.455  1.00 35.74
ATOM   1795  O   ALA A 231      30.004  52.384  53.260  1.00 38.85
ATOM   1796  CB  ALA A 231      28.386  54.807  51.575  1.00 28.68
ATOM   1797  N   TYR A 232      30.040  54.332  54.280  1.00 28.97
ATOM   1798  CA  TYR A 232      31.288  53.956  54.919  1.00 25.66
ATOM   1799  C   TYR A 232      31.106  52.830  55.956  1.00 26.63
ATOM   1800  O   TYR A 232      31.764  51.786  55.952  1.00 24.11
ATOM   1801  CB  TYR A 232      31.878  55.221  55.590  1.00 26.53
ATOM   1802  CG  TYR A 232      33.048  54.883  56.450  1.00 30.29
ATOM   1803  CD1 TYR A 232      34.327  54.751  55.908  1.00 30.47
ATOM   1804  CD2 TYR A 232      32.868  54.647  57.812  1.00 34.13
ATOM   1805  CE1 TYR A 232      35.417  54.417  56.707  1.00 26.95
ATOM   1806  CE2 TYR A 232      33.943  54.289  58.629  1.00 34.94
ATOM   1807  CZ  TYR A 232      35.214  54.187  58.066  1.00 44.35
ATOM   1808  OH  TYR A 232      36.267  53.838  58.863  1.00 56.64
ATOM   1809  N   GLU A 233      30.179  53.101  56.854  1.00 26.62
ATOM   1810  CA  GLU A 233      29.848  52.255  57.979  1.00 27.40
ATOM   1811  C   GLU A 233      29.586  50.785  57.683  1.00 28.97
ATOM   1812  O   GLU A 233      29.998  49.912  58.455  1.00 27.06
ATOM   1813  CB  GLU A 233      28.713  52.881  58.849  1.00 27.79
ATOM   1814  CG  GLU A 233      28.710  52.367  60.318  1.00 32.42
ATOM   1815  CD  GLU A 233      29.479  53.250  61.292  1.00 34.47
ATOM   1816  OE1 GLU A 233      29.548  54.465  61.172  1.00 47.34
ATOM   1817  OE2 GLU A 233      30.072  52.579  62.261  1.00 24.38
ATOM   1818  N   PHE A 234      28.882  50.539  56.585  1.00 23.50
ATOM   1819  CA  PHE A 234      28.512  49.208  56.200  1.00 21.67
ATOM   1820  C   PHE A 234      29.297  48.665  55.053  1.00 27.27
ATOM   1821  O   PHE A 234      28.810  47.809  54.321  1.00 31.39
ATOM   1822  CB  PHE A 234      27.040  49.233  55.806  1.00 23.23
ATOM   1823  CG  PHE A 234      26.222  49.890  56.874  1.00 24.19
ATOM   1824  CD1 PHE A 234      26.462  49.613  58.221  1.00 24.83
ATOM   1825  CD2 PHE A 234      25.214  50.788  56.532  1.00 25.46
ATOM   1826  CE1 PHE A 234      25.696  50.207  59.223  1.00 23.19
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ATOM 1827 CE2 PHE A 234 24.461 51.411 57.526 1.00 28.00
ATOM 1828 CZ PHE A 234 24.697 51.113 58.869 1.00 23.00
ATOM 1829 N SER A 235 30.508 49.151 54.883 1.00 27.12
ATOM 1830 CA SER A 235 31.342 48.689 53.787 1.00 25.76
ATOM 1831 C SER A 235 31.469 47.166 53.731 1.00 31.87
ATOM 1832 O SER A 235 31.329 46.571 52.658 1.00 31.51
ATOM 1833 CB SER A 235 32.706 49.348 53.801 1.00 23.97
ATOM 1834 OG SER A 235 33.403 49.017 54.987 1.00 31.36
ATOM 1835 N GLU A 236 31.715 46.554 54.905 1.00 24.57
ATOM 1836 CA GLU A 236 31.883 45.120 55.032 1.00 23.90
ATOM 1837 C GLU A 236 30.683 44.241 54.687 1.00 26.57
ATOM 1838 O GLU A 236 30.735 43.032 54.900 1.00 26.86
ATOM 1839 CB GLU A 236 32.348 44.786 56.440 1.00 25.38
ATOM 1840 CG GLU A 236 33.520 45.662 56.873 1.00 34.31
ATOM 1841 CD GLU A 236 33.663 45.666 58.366 1.00 73.76
ATOM 1842 OE1 GLU A 236 32.739 45.910 59.133 1.00 40.32
ATOM 1843 OE2 GLU A 236 34.876 45.354 58.750 1.00 83.10
ATOM 1844 N THR A 237 29.610 44.828 54.150 1.00 20.07
ATOM 1845 CA THR A 237 28.437 44.060 53.819 1.00 18.84
ATOM 1846 C THR A 237 28.713 42.900 52.887 1.00 27.55
ATOM 1847 O THR A 237 28.342 41.774 53.189 1.00 29.80
ATOM 1848 CB THR A 237 27.276 44.944 53.339 1.00 27.61
ATOM 1849 OG1 THR A 237 26.930 45.851 54.347 1.00 26.27
ATOM 1850 CG2 THR A 237 26.046 44.143 52.933 1.00 20.18
ATOM 1851 N GLU A 238 29.346 43.140 51.747 1.00 24.98
ATOM 1852 CA GLU A 238 29.605 42.022 50.840 1.00 25.71
ATOM 1853 C GLU A 238 30.408 40.914 51.463 1.00 27.50
ATOM 1854 O GLU A 238 30.091 39.740 51.324 1.00 30.32
ATOM 1855 CB GLU A 238 30.169 42.373 49.467 1.00 27.51
ATOM 1856 CG GLU A 238 30.292 41.101 48.580 1.00 31.12
ATOM 1857 CD GLU A 238 29.006 40.489 48.048 1.00 29.47
ATOM 1858 OE1 GLU A 238 27.929 41.034 47.978 1.00 38.32
ATOM 1859 OE2 GLU A 238 29.179 39.289 47.615 1.00 42.12
ATOM 1860 N SER A 239 31.452 41.269 52.164 1.00 21.93
ATOM 1861 CA SER A 239 32.224 40.232 52.797 1.00 21.40
ATOM 1862 C SER A 239 31.377 39.410 53.774 1.00 26.79
ATOM 1863 O SER A 239 31.519 38.208 53.878 1.00 26.27
ATOM 1864 CB SER A 239 33.430 40.788 53.514 1.00 24.31
ATOM 1865 OG SER A 239 32.995 41.369 54.724 1.00 36.29
ATOM 1866 N MET A 240 30.485 40.044 54.530 1.00 25.33
ATOM 1867 CA MET A 240 29.664 39.280 55.453 1.00 21.61
ATOM 1868 C MET A 240 28.750 38.383 54.688 1.00 26.18
ATOM 1869 O MET A 240 28.580 37.213 55.018 1.00 29.19
ATOM 1870 CB MET A 240 28.835 40.185 56.336 1.00 23.33
ATOM 1871 CG MET A 240 29.742 40.959 57.255 1.00 26.34
ATOM 1872 SD MET A 240 28.757 42.096 58.238 1.00 30.69
ATOM 1873 CE MET A 240 29.893 42.395 59.603 1.00 27.76
ATOM 1874 N LEU A 241 28.156 38.934 53.644 1.00 21.61
ATOM 1875 CA LEU A 241 27.256 38.144 52.818 1.00 23.24
ATOM 1876 C LEU A 241 27.981 36.906 52.359 1.00 29.61
ATOM 1877 O LEU A 241 27.435 35.823 52.366 1.00 32.57
ATOM 1878 CB LEU A 241 26.831 38.927 51.573 1.00 24.85
ATOM 1879 CG LEU A 241 25.516 39.666 51.717 1.00 31.80
ATOM 1880 CD1 LEU A 241 25.434 40.804 50.698 1.00 30.81
ATOM 1881 CD2 LEU A 241 24.379 38.694 51.460 1.00 35.10
ATOM 1882 N LYS A 242 29.244 37.051 51.954 1.00 28.99
ATOM 1883 CA LYS A 242 29.979 35.880 51.488 1.00 27.43
ATOM 1884 C LYS A 242 30.170 34.839 52.556 1.00 26.46

ATOM 1885 O LYS A 242 30.026 33.662 52.290 1.00 25.83
ATOM 1886 CB LYS A 242 31.267 36.205 50.763 1.00 30.42
ATOM 1887 CG LYS A 242 31.015 36.447 49.291 1.00 32.91
ATOM 1888 CD LYS A 242 32.171 37.142 48.591 1.00 59.75
ATOM 1889 CE LYS A 242 31.815 38.564 48.172 1.00 63.56
ATOM 1890 NZ LYS A 242 32.262 38.944 46.821 1.00 60.62
ATOM 1891 N ILE A 243 30.490 35.282 53.766 1.00 21.79
ATOM 1892 CA ILE A 243 30.698 34.341 54.858 1.00 22.45
ATOM 1893 C ILE A 243 29.405 33.594 55.138 1.00 24.79
ATOM 1894 O ILE A 243 29.362 32.375 55.319 1.00 24.38
ATOM 1895 CB ILE A 243 31.237 35.038 56.109 1.00 25.48
ATOM 1896 CG1 ILE A 243 32.592 35.666 55.815 1.00 27.23
ATOM 1897 CG2 ILE A 243 31.354 34.044 57.263 1.00 24.60
ATOM 1898 CD1 ILE A 243 33.202 36.392 57.016 1.00 24.23
ATOM 1899 N ALA A 244 28.339 34.372 55.128 1.00 19.81
ATOM 1900 CA ALA A 244 27.047 33.837 55.384 1.00 19.55
ATOM 1901 C ALA A 244 26.690 32.721 54.413 1.00 27.11
ATOM 1902 O ALA A 244 26.100 31.692 54.790 1.00 25.26
ATOM 1903 CB ALA A 244 26.031 34.969 55.400 1.00 19.21
ATOM 1904 N GLU A 245 27.066 32.933 53.146 1.00 27.29
ATOM 1905 CA GLU A 245 26.761 31.949 52.111 1.00 25.68
ATOM 1906 C GLU A 245 27.436 30.651 52.396 1.00 30.57
ATOM 1907 O GLU A 245 26.869 29.580 52.183 1.00 30.82
ATOM 1908 CB GLU A 245 27.084 32.415 50.691 1.00 25.71
ATOM 1909 CG GLU A 245 25.914 33.199 50.106 1.00 31.03
ATOM 1910 CD GLU A 245 26.225 33.838 48.794 1.00 38.47
ATOM 1911 OE1 GLU A 245 27.175 34.588 48.613 1.00 36.65
ATOM 1912 OE2 GLU A 245 25.353 33.507 47.876 1.00 42.50
ATOM 1913 N ASP A 246 28.649 30.778 52.887 1.00 25.43
ATOM 1914 CA ASP A 246 29.451 29.643 53.212 1.00 26.46
ATOM 1915 C ASP A 246 28.875 28.913 54.410 1.00 31.36
ATOM 1916 O ASP A 246 28.969 27.701 54.571 1.00 33.32
ATOM 1917 CB ASP A 246 30.900 30.080 53.480 1.00 31.18
ATOM 1918 CG ASP A 246 31.794 28.904 53.736 1.00 65.05
ATOM 1919 OD1 ASP A 246 32.175 28.171 52.842 1.00 74.67
ATOM 1920 OD2 ASP A 246 32.085 28.726 55.010 1.00 73.86
ATOM 1921 N LEU A 247 28.253 29.651 55.267 1.00 24.37
ATOM 1922 CA LEU A 247 27.713 29.020 56.425 1.00 24.71
ATOM 1923 C LEU A 247 26.326 28.469 56.212 1.00 27.23
ATOM 1924 O LEU A 247 26.025 27.388 56.709 1.00 29.85
ATOM 1925 CB LEU A 247 27.715 29.984 57.653 1.00 25.90
ATOM 1926 CG LEU A 247 29.069 30.647 57.905 1.00 28.01
ATOM 1927 CD1 LEU A 247 28.934 31.696 58.983 1.00 27.01
ATOM 1928 CD2 LEU A 247 30.051 29.603 58.370 1.00 30.42
ATOM 1929 N GLY A 248 25.454 29.203 55.517 1.00 23.34
ATOM 1930 CA GLY A 248 24.102 28.671 55.384 1.00 23.65
ATOM 1931 C GLY A 248 23.720 28.204 53.993 1.00 27.51
ATOM 1932 O GLY A 248 22.598 27.784 53.765 1.00 24.78
ATOM 1933 N GLY A 249 24.635 28.283 53.047 1.00 23.68
ATOM 1934 CA GLY A 249 24.250 27.882 51.729 1.00 23.61
ATOM 1935 C GLY A 249 23.951 29.127 50.944 1.00 31.96
ATOM 1936 O GLY A 249 23.996 30.204 51.471 1.00 30.39
ATOM 1937 N PRO A 250 23.640 28.981 49.674 1.00 37.24
ATOM 1938 CA PRO A 250 23.359 30.099 48.806 1.00 38.84
ATOM 1939 C PRO A 250 22.317 31.103 49.290 1.00 37.99
ATOM 1940 O PRO A 250 21.289 30.775 49.903 1.00 35.02
ATOM 1941 CB PRO A 250 22.830 29.484 47.504 1.00 41.32
ATOM 1942 CG PRO A 250 22.393 28.072 47.831 1.00 44.27

ATOM 1943 CD PRO A 250 23.026 27.730 49.162 1.00 40.21
ATOM 1944 N TYR A 251 22.616 32.351 48.956 1.00 31.18
ATOM 1945 CA TYR A 251 21.758 33.456 49.230 1.00 26.41
ATOM 1946 C TYR A 251 20.802 33.418 48.067 1.00 27.76
ATOM 1947 O TYR A 251 21.234 33.528 46.926 1.00 27.95
ATOM 1948 CB TYR A 251 22.601 34.723 49.143 1.00 25.32
ATOM 1949 CG TYR A 251 21.787 35.954 49.397 1.00 28.06
ATOM 1950 CD1 TYR A 251 21.368 36.246 50.695 1.00 29.60
ATOM 1951 CD2 TYR A 251 21.437 36.831 48.367 1.00 27.85
ATOM 1952 CE1 TYR A 251 20.618 37.392 50.963 1.00 28.45
ATOM 1953 CE2 TYR A 251 20.687 37.982 48.616 1.00 27.14
ATOM 1954 CZ TYR A 251 20.292 38.270 49.926 1.00 25.89
ATOM 1955 OH TYR A 251 19.551 39.392 50.199 1.00 20.56
ATOM 1956 N VAL A 252 19.519 33.243 48.328 1.00 24.99
ATOM 1957 CA VAL A 252 18.535 33.115 47.251 1.00 25.59
ATOM 1958 C VAL A 252 17.696 34.351 46.925 1.00 28.69
ATOM 1959 O VAL A 252 16.868 34.320 46.014 1.00 25.00
ATOM 1960 CB VAL A 252 17.562 31.979 47.627 1.00 30.01
ATOM 1961 CG1 VAL A 252 18.288 30.668 47.953 1.00 29.63
ATOM 1962 CG2 VAL A 252 16.646 32.391 48.789 1.00 29.32
ATOM 1963 N TRP A 253 17.858 35.425 47.689 1.00 25.81
ATOM 1964 CA TRP A 253 17.046 36.599 47.504 1.00 23.18
ATOM 1965 C TRP A 253 17.432 37.542 46.388 1.00 28.15
ATOM 1966 O TRP A 253 16.655 38.427 46.037 1.00 27.55
ATOM 1967 CB TRP A 253 16.824 37.329 48.813 1.00 19.42
ATOM 1968 CG TRP A 253 16.418 36.383 49.878 1.00 20.56
ATOM 1969 CD1 TRP A 253 17.256 35.687 50.673 1.00 22.97
ATOM 1970 CD2 TRP A 253 15.087 36.014 50.249 1.00 19.71
ATOM 1971 NE1 TRP A 253 16.525 34.902 51.541 1.00 22.22
ATOM 1972 CE2 TRP A 253 15.192 35.109 51.309 1.00 22.80
ATOM 1973 CE3 TRP A 253 13.829 36.398 49.817 1.00 21.50
ATOM 1974 CZ2 TRP A 253 14.063 34.577 51.925 1.00 23.69
ATOM 1975 CZ3 TRP A 253 12.709 35.878 50.412 1.00 24.31
ATOM 1976 CH2 TRP A 253 12.823 34.974 51.466 1.00 24.84
ATOM 1977 N GLY A 254 18.625 37.367 45.843 1.00 25.04
ATOM 1978 CA GLY A 254 19.102 38.192 44.739 1.00 26.11
ATOM 1979 C GLY A 254 19.864 39.404 45.200 1.00 31.09
ATOM 1980 O GLY A 254 21.098 39.431 45.258 1.00 34.73
ATOM 1981 N GLN A 255 19.098 40.410 45.535 1.00 29.08
ATOM 1982 CA GLN A 255 19.648 41.666 45.995 1.00 29.63
ATOM 1983 C GLN A 255 19.728 41.712 47.507 1.00 29.64
ATOM 1984 O GLN A 255 18.887 41.114 48.196 1.00 30.51
ATOM 1985 CB GLN A 255 18.784 42.833 45.468 1.00 31.78
ATOM 1986 CG GLN A 255 19.424 44.221 45.672 1.00 44.26
ATOM 1987 CD GLN A 255 20.587 44.500 44.732 1.00 54.96
ATOM 1988 OE1 GLN A 255 21.252 45.543 44.825 1.00 36.97
ATOM 1989 NE2 GLN A 255 20.846 43.559 43.829 1.00 52.17
ATOM 1990 N TYR A 256 20.763 42.399 47.992 1.00 27.13
ATOM 1991 CA TYR A 256 20.978 42.641 49.402 1.00 25.23
ATOM 1992 C TYR A 256 21.188 44.115 49.648 1.00 25.37
ATOM 1993 O TYR A 256 22.317 44.554 49.816 1.00 25.89
ATOM 1994 CB TYR A 256 22.034 41.819 50.137 1.00 25.95
ATOM 1995 CG TYR A 256 21.872 42.059 51.629 1.00 24.48
ATOM 1996 CD1 TYR A 256 20.961 41.306 52.373 1.00 25.11
ATOM 1997 CD2 TYR A 256 22.604 43.053 52.281 1.00 24.57
ATOM 1998 CE1 TYR A 256 20.779 41.529 53.738 1.00 22.81
ATOM 1999 CE2 TYR A 256 22.423 43.302 53.640 1.00 23.52
ATOM 2000 CZ TYR A 256 21.523 42.526 54.369 1.00 27.26

ATOM 2001 OH TYR A 256 21.356 42.772 55.707 1.00 26.88
ATOM 2002 N ASP A 257 20.080 44.863 49.634 1.00 22.34
ATOM 2003 CA ASP A 257 20.118 46.288 49.871 1.00 19.26
ATOM 2004 C ASP A 257 19.947 46.597 51.343 1.00 27.05
ATOM 2005 O ASP A 257 19.324 45.823 52.093 1.00 26.42
ATOM 2006 CB ASP A 257 19.064 47.071 49.069 1.00 19.63
ATOM 2007 CG ASP A 257 19.470 47.325 47.621 1.00 38.29
ATOM 2008 OD1 ASP A 257 20.533 46.922 47.146 1.00 35.24
ATOM 2009 OD2 ASP A 257 18.557 47.994 46.914 1.00 33.46
ATOM 2010 N LEU A 258 20.488 47.772 51.708 1.00 25.54
ATOM 2011 CA LEU A 258 20.451 48.319 53.050 1.00 23.91
ATOM 2012 C LEU A 258 19.752 49.651 53.020 1.00 27.43
ATOM 2013 O LEU A 258 20.058 50.464 52.152 1.00 26.91
ATOM 2014 CB LEU A 258 21.861 48.551 53.612 1.00 23.00
ATOM 2015 CG LEU A 258 22.542 47.293 54.130 1.00 24.65
ATOM 2016 CD1 LEU A 258 23.897 47.652 54.753 1.00 21.61
ATOM 2017 CD2 LEU A 258 21.650 46.669 55.192 1.00 27.74
ATOM 2018 N LEU A 259 18.824 49.843 53.974 1.00 22.63
ATOM 2019 CA LEU A 259 18.083 51.075 54.135 1.00 22.66
ATOM 2020 C LEU A 259 18.266 51.673 55.530 1.00 25.16
ATOM 2021 O LEU A 259 17.868 51.030 56.505 1.00 24.40
ATOM 2022 CB LEU A 259 16.597 50.897 53.874 1.00 23.11
ATOM 2023 CG LEU A 259 15.825 52.166 54.225 1.00 31.10
ATOM 2024 CD1 LEU A 259 16.317 53.352 53.395 1.00 30.78
ATOM 2025 CD2 LEU A 259 14.350 51.938 53.966 1.00 36.76
ATOM 2026 N VAL A 260 18.858 52.889 55.615 1.00 18.62
ATOM 2027 CA VAL A 260 19.068 53.580 56.888 1.00 19.24
ATOM 2028 C VAL A 260 17.897 54.493 57.154 1.00 26.41
ATOM 2029 O VAL A 260 17.739 55.527 56.516 1.00 28.56
ATOM 2030 CB VAL A 260 20.372 54.347 56.891 1.00 22.59
ATOM 2031 CG1 VAL A 260 20.683 54.811 58.307 1.00 23.06
ATOM 2032 CG2 VAL A 260 21.488 53.433 56.439 1.00 21.80
ATOM 2033 N LEU A 261 17.043 54.091 58.071 1.00 21.39
ATOM 2034 CA LEU A 261 15.837 54.831 58.380 1.00 21.91
ATOM 2035 C LEU A 261 16.041 56.017 59.301 1.00 26.50
ATOM 2036 O LEU A 261 17.140 56.271 59.778 1.00 24.09
ATOM 2037 CB LEU A 261 14.843 53.867 59.040 1.00 22.05
ATOM 2038 CG LEU A 261 14.170 53.020 57.974 1.00 28.76
ATOM 2039 CD1 LEU A 261 14.886 51.690 57.819 1.00 30.80
ATOM 2040 CD2 LEU A 261 12.683 52.859 58.230 1.00 35.84
ATOM 2041 N PRO A 262 14.946 56.724 59.565 1.00 27.39
ATOM 2042 CA PRO A 262 14.989 57.844 60.482 1.00 24.71
ATOM 2043 C PRO A 262 15.240 57.299 61.883 1.00 29.27
ATOM 2044 O PRO A 262 14.976 56.121 62.194 1.00 23.29
ATOM 2045 CB PRO A 262 13.633 58.545 60.417 1.00 25.90
ATOM 2046 CG PRO A 262 12.874 57.922 59.250 1.00 34.11
ATOM 2047 CD PRO A 262 13.695 56.734 58.755 1.00 29.92
ATOM 2048 N PRO A 263 15.768 58.169 62.739 1.00 24.50
ATOM 2049 CA PRO A 263 16.097 57.785 64.103 1.00 22.41
ATOM 2050 C PRO A 263 14.989 57.128 64.915 1.00 23.03
ATOM 2051 O PRO A 263 15.285 56.382 65.848 1.00 24.15
ATOM 2052 CB PRO A 263 16.661 59.038 64.775 1.00 23.47
ATOM 2053 CG PRO A 263 16.861 60.088 63.682 1.00 26.06
ATOM 2054 CD PRO A 263 16.162 59.575 62.426 1.00 22.82
ATOM 2055 N SER A 264 13.719 57.369 64.577 1.00 20.93
ATOM 2056 CA SER A 264 12.600 56.767 65.319 1.00 20.14
ATOM 2057 C SER A 264 12.401 55.293 64.989 1.00 23.06
ATOM 2058 O SER A 264 11.574 54.623 65.602 1.00 23.10

ATOM 2059 CB SER A 264 11.281 57.498 65.183 1.00 23.65
ATOM 2060 OG SER A 264 10.912 57.500 63.823 1.00 21.88
ATOM 2061 N PHE A 265 13.175 54.762 64.054 1.00 17.44
ATOM 2062 CA PHE A 265 12.995 53.336 63.775 1.00 16.88
ATOM 2063 C PHE A 265 13.155 52.576 65.093 1.00 19.17
ATOM 2064 O PHE A 265 14.149 52.730 65.785 1.00 19.42
ATOM 2065 CB PHE A 265 13.962 52.852 62.696 1.00 18.72
ATOM 2066 CG PHE A 265 13.632 51.450 62.311 1.00 20.49
ATOM 2067 CD1 PHE A 265 12.412 51.173 61.701 1.00 24.10
ATOM 2068 CD2 PHE A 265 14.527 50.413 62.564 1.00 23.76
ATOM 2069 CE1 PHE A 265 12.088 49.869 61.342 1.00 27.40
ATOM 2070 CE2 PHE A 265 14.210 49.100 62.218 1.00 28.74
ATOM 2071 CZ PHE A 265 12.987 48.833 61.605 1.00 27.12
ATOM 2072 N PRO A 266 12.158 51.803 65.451 1.00 18.02
ATOM 2073 CA PRO A 266 12.110 51.080 66.718 1.00 18.74
ATOM 2074 C PRO A 266 13.107 49.965 67.013 1.00 20.27
ATOM 2075 O PRO A 266 13.293 49.635 68.170 1.00 15.77
ATOM 2076 CB PRO A 266 10.696 50.520 66.822 1.00 20.13
ATOM 2077 CG PRO A 266 10.127 50.546 65.416 1.00 23.78
ATOM 2078 CD PRO A 266 10.967 51.531 64.615 1.00 19.11
ATOM 2079 N TYR A 267 13.706 49.338 66.001 1.00 20.63
ATOM 2080 CA TYR A 267 14.644 48.224 66.235 1.00 21.13
ATOM 2081 C TYR A 267 16.031 48.497 65.651 1.00 22.74
ATOM 2082 O TYR A 267 16.215 49.455 64.905 1.00 21.89
ATOM 2083 CB TYR A 267 14.099 46.909 65.603 1.00 22.60
ATOM 2084 CG TYR A 267 12.764 46.544 66.176 1.00 19.52
ATOM 2085 CD1 TYR A 267 12.726 45.858 67.389 1.00 19.63
ATOM 2086 CD2 TYR A 267 11.572 46.933 65.560 1.00 16.80
ATOM 2087 CE1 TYR A 267 11.507 45.541 67.987 1.00 21.00
ATOM 2088 CE2 TYR A 267 10.345 46.631 66.151 1.00 16.26
ATOM 2089 CZ TYR A 267 10.322 45.924 67.360 1.00 21.79
ATOM 2090 OH TYR A 267 9.143 45.605 67.993 1.00 24.21
ATOM 2091 N GLY A 268 17.000 47.617 65.975 1.00 19.60
ATOM 2092 CA GLY A 268 18.352 47.747 65.451 1.00 19.06
ATOM 2093 C GLY A 268 18.283 47.578 63.946 1.00 21.42
ATOM 2094 O GLY A 268 18.978 48.228 63.181 1.00 22.34
ATOM 2095 N GLY A 269 17.396 46.686 63.510 1.00 20.52
ATOM 2096 CA GLY A 269 17.230 46.448 62.098 1.00 22.99
ATOM 2097 C GLY A 269 16.037 45.582 61.887 1.00 24.74
ATOM 2098 O GLY A 269 15.439 45.139 62.853 1.00 21.33
ATOM 2099 N MET A 270 15.707 45.343 60.640 1.00 17.60
ATOM 2100 CA MET A 270 14.587 44.484 60.297 1.00 18.47
ATOM 2101 C MET A 270 14.949 43.752 59.018 1.00 20.42
ATOM 2102 O MET A 270 15.180 44.400 58.002 1.00 20.98
ATOM 2103 CB MET A 270 13.245 45.239 60.175 1.00 20.50
ATOM 2104 CG MET A 270 12.115 44.327 59.735 1.00 22.45
ATOM 2105 SD MET A 270 11.714 43.058 60.971 1.00 25.36
ATOM 2106 CE MET A 270 11.200 41.680 59.881 1.00 19.04
ATOM 2107 N GLU A 271 15.044 42.420 59.093 1.00 18.93
ATOM 2108 CA GLU A 271 15.439 41.551 57.963 1.00 16.80
ATOM 2109 C GLU A 271 14.510 41.520 56.750 1.00 23.10
ATOM 2110 O GLU A 271 14.293 40.443 56.147 1.00 20.21
ATOM 2111 CB GLU A 271 15.734 40.109 58.465 1.00 16.80
ATOM 2112 CG GLU A 271 14.466 39.377 58.960 1.00 15.05
ATOM 2113 CD GLU A 271 14.180 39.703 60.400 1.00 33.48
ATOM 2114 OE1 GLU A 271 14.547 40.735 60.934 1.00 25.20
ATOM 2115 OE2 GLU A 271 13.551 38.745 61.029 1.00 21.14
ATOM 2116 N ASN A 272 13.954 42.685 56.346 1.00 20.52

ATOM 2117 CA ASN A 272 13.048 42.655 55.193 1.00 17.75
ATOM 2118 C ASN A 272 13.790 42.114 54.010 1.00 17.01
ATOM 2119 O ASN A 272 14.851 42.638 53.703 1.00 19.21
ATOM 2120 CB ASN A 272 12.370 44.003 54.915 1.00 17.79
ATOM 2121 CG ASN A 272 11.661 44.572 56.136 1.00 24.23
ATOM 2122 OD1 ASN A 272 11.907 45.714 56.563 1.00 37.07
ATOM 2123 ND2 ASN A 272 10.751 43.792 56.694 1.00 16.34
ATOM 2124 N PRO A 273 13.261 41.060 53.393 1.00 16.33
ATOM 2125 CA PRO A 273 13.943 40.451 52.265 1.00 17.34
ATOM 2126 C PRO A 273 14.267 41.446 51.173 1.00 24.95
ATOM 2127 O PRO A 273 13.431 42.244 50.757 1.00 26.24
ATOM 2128 CB PRO A 273 13.064 39.333 51.737 1.00 19.31
ATOM 2129 CG PRO A 273 11.797 39.328 52.569 1.00 22.96
ATOM 2130 CD PRO A 273 11.925 40.459 53.588 1.00 16.97
ATOM 2131 N CYS A 274 15.516 41.386 50.721 1.00 24.19
ATOM 2132 CA CYS A 274 16.054 42.254 49.675 1.00 25.84
ATOM 2133 C CYS A 274 16.278 43.666 50.140 1.00 27.71
ATOM 2134 O CYS A 274 16.936 44.425 49.409 1.00 28.34
ATOM 2135 CB CYS A 274 15.180 42.385 48.407 1.00 28.74
ATOM 2136 SG CYS A 274 14.523 40.833 47.746 1.00 33.56
ATOM 2137 N LEU A 275 15.724 44.015 51.305 1.00 21.22
ATOM 2138 CA LEU A 275 15.832 45.374 51.803 1.00 20.67
ATOM 2139 C LEU A 275 15.945 45.425 53.310 1.00 23.51
ATOM 2140 O LEU A 275 14.982 45.644 54.033 1.00 18.39
ATOM 2141 CB LEU A 275 14.631 46.228 51.307 1.00 20.52
ATOM 2142 CG LEU A 275 14.710 47.769 51.456 1.00 24.37
ATOM 2143 CD1 LEU A 275 15.999 48.306 50.851 1.00 23.96
ATOM 2144 CD2 LEU A 275 13.543 48.414 50.707 1.00 29.41
ATOM 2145 N THR A 276 17.155 45.224 53.790 1.00 26.98
ATOM 2146 CA THR A 276 17.313 45.296 55.226 1.00 27.92
ATOM 2147 C THR A 276 17.166 46.737 55.742 1.00 24.32
ATOM 2148 O THR A 276 17.704 47.680 55.197 1.00 21.95
ATOM 2149 CB THR A 276 18.635 44.667 55.732 1.00 28.74
ATOM 2150 OG1 THR A 276 18.526 43.261 55.810 1.00 29.92
ATOM 2151 CG2 THR A 276 18.941 45.171 57.132 1.00 23.98
ATOM 2152 N PHE A 277 16.425 46.889 56.810 1.00 19.33
ATOM 2153 CA PHE A 277 16.265 48.202 57.427 1.00 19.10
ATOM 2154 C PHE A 277 17.203 48.239 58.632 1.00 26.76
ATOM 2155 O PHE A 277 17.305 47.246 59.382 1.00 26.98
ATOM 2156 CB PHE A 277 14.839 48.407 58.017 1.00 19.49
ATOM 2157 CG PHE A 277 13.757 48.622 57.003 1.00 20.03
ATOM 2158 CD1 PHE A 277 13.966 48.271 55.668 1.00 24.06
ATOM 2159 CD2 PHE A 277 12.516 49.134 57.377 1.00 22.03
ATOM 2160 CE1 PHE A 277 12.973 48.469 54.705 1.00 24.67
ATOM 2161 CE2 PHE A 277 11.505 49.328 56.430 1.00 24.89
ATOM 2162 CZ PHE A 277 11.743 48.995 55.094 1.00 22.53
ATOM 2163 N VAL A 278 17.863 49.370 58.858 1.00 21.23
ATOM 2164 CA VAL A 278 18.723 49.495 60.017 1.00 19.76
ATOM 2165 C VAL A 278 18.559 50.854 60.637 1.00 25.21
ATOM 2166 O VAL A 278 18.247 51.859 59.974 1.00 21.23
ATOM 2167 CB VAL A 278 20.211 49.239 59.774 1.00 25.14
ATOM 2168 CG1 VAL A 278 20.418 47.900 59.090 1.00 25.71
ATOM 2169 CG2 VAL A 278 20.802 50.363 58.929 1.00 24.26
ATOM 2170 N THR A 279 18.801 50.869 61.927 1.00 20.05
ATOM 2171 CA THR A 279 18.704 52.104 62.667 1.00 19.13
ATOM 2172 C THR A 279 19.897 52.980 62.347 1.00 23.23
ATOM 2173 O THR A 279 20.995 52.487 62.151 1.00 22.78
ATOM 2174 CB THR A 279 18.714 51.813 64.186 1.00 16.11

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ATOM 2175 OG1 THR A 279 18.714 53.050 64.868 1.00 19.82
ATOM 2176 CG2 THR A 279 19.964 51.004 64.542 1.00 16.49
ATOM 2177 N PRO A 280 19.702 54.306 62.335 1.00 24.27
ATOM 2178 CA PRO A 280 20.833 55.201 62.087 1.00 22.03
ATOM 2179 C PRO A 280 21.748 55.222 63.312 1.00 23.36
ATOM 2180 O PRO A 280 22.871 55.758 63.265 1.00 22.67
ATOM 2181 CB PRO A 280 20.272 56.603 61.813 1.00 22.22
ATOM 2182 CG PRO A 280 18.766 56.520 62.043 1.00 27.67
ATOM 2183 CD PRO A 280 18.397 55.053 62.250 1.00 23.53
ATOM 2184 N THR A 281 21.266 54.616 64.405 1.00 17.56
ATOM 2185 CA THR A 281 22.082 54.545 65.602 1.00 17.27
ATOM 2186 C THR A 281 23.287 53.665 65.362 1.00 21.93
ATOM 2187 O THR A 281 24.183 53.597 66.199 1.00 20.04
ATOM 2188 CB THR A 281 21.373 54.112 66.902 1.00 17.56
ATOM 2189 OG1 THR A 281 20.857 52.799 66.785 1.00 21.89
ATOM 2190 CG2 THR A 281 20.283 55.142 67.261 1.00 21.96
ATOM 2191 N LEU A 282 23.312 52.977 64.232 1.00 17.97
ATOM 2192 CA LEU A 282 24.487 52.135 63.947 1.00 17.90
ATOM 2193 C LEU A 282 25.696 52.965 63.437 1.00 22.56
ATOM 2194 O LEU A 282 26.821 52.478 63.352 1.00 22.13
ATOM 2195 CB LEU A 282 24.206 51.077 62.864 1.00 15.83
ATOM 2196 CG LEU A 282 23.051 50.117 63.132 1.00 21.56
ATOM 2197 CD1 LEU A 282 23.068 49.007 62.079 1.00 20.06
ATOM 2198 CD2 LEU A 282 23.201 49.502 64.507 1.00 17.47
ATOM 2199 N LEU A 283 25.452 54.219 63.053 1.00 20.88
ATOM 2200 CA LEU A 283 26.501 55.049 62.479 1.00 21.60
ATOM 2201 C LEU A 283 27.522 55.554 63.463 1.00 29.62
ATOM 2202 O LEU A 283 27.624 56.755 63.633 1.00 31.93
ATOM 2203 CB LEU A 283 25.895 56.225 61.682 1.00 21.41
ATOM 2204 CG LEU A 283 24.839 55.780 60.662 1.00 24.34
ATOM 2205 CD1 LEU A 283 24.230 57.001 59.956 1.00 23.79
ATOM 2206 CD2 LEU A 283 25.480 54.835 59.639 1.00 26.70
ATOM 2207 N ALA A 284 28.271 54.652 64.118 1.00 26.89
ATOM 2208 CA ALA A 284 29.257 55.077 65.103 1.00 24.30
ATOM 2209 C ALA A 284 30.467 55.770 64.477 1.00 29.39
ATOM 2210 O ALA A 284 31.203 56.476 65.155 1.00 31.04
ATOM 2211 CB ALA A 284 29.694 53.941 66.015 1.00 24.10
ATOM 2212 N GLY A 285 30.694 55.561 63.180 1.00 22.20
ATOM 2213 CA GLY A 285 31.822 56.190 62.534 1.00 21.17
ATOM 2214 C GLY A 285 33.061 55.295 62.386 1.00 31.73
ATOM 2215 O GLY A 285 34.013 55.659 61.696 1.00 32.59
ATOM 2216 N ASP A 286 33.063 54.105 63.020 1.00 28.41
ATOM 2217 CA ASP A 286 34.184 53.180 62.939 1.00 21.98
ATOM 2218 C ASP A 286 33.757 51.763 62.583 1.00 25.41
ATOM 2219 O ASP A 286 34.532 50.834 62.765 1.00 24.81
ATOM 2220 CB ASP A 286 34.906 53.146 64.268 1.00 22.94
ATOM 2221 CG ASP A 286 33.959 52.719 65.334 1.00 33.17
ATOM 2222 OD1 ASP A 286 32.821 52.362 65.097 1.00 32.35
ATOM 2223 OD2 ASP A 286 34.492 52.744 66.523 1.00 37.83
ATOM 2224 N LYS A 287 32.512 51.605 62.122 1.00 23.26
ATOM 2225 CA LYS A 287 31.988 50.297 61.719 1.00 23.59
ATOM 2226 C LYS A 287 31.865 49.336 62.888 1.00 24.51
ATOM 2227 O LYS A 287 31.681 48.136 62.711 1.00 23.45
ATOM 2228 CB LYS A 287 32.918 49.636 60.694 1.00 24.58
ATOM 2229 CG LYS A 287 33.510 50.531 59.618 1.00 29.73
ATOM 2230 CD LYS A 287 34.297 49.706 58.598 1.00 34.17
ATOM 2231 CE LYS A 287 35.044 50.517 57.572 1.00 33.69
ATOM 2232 NZ LYS A 287 34.164 51.281 56.664 1.00 36.75

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ATOM   2233  N   SER A 288      31.972  49.866  64.091  1.00 23.33
ATOM   2234  CA  SER A 288      31.941  49.045  65.285  1.00 20.21
ATOM   2235  C   SER A 288      30.649  48.286  65.585  1.00 26.52
ATOM   2236  O   SER A 288      30.671  47.247  66.272  1.00 24.43
ATOM   2237  CB  SER A 288      32.482  49.805  66.483  1.00 18.45
ATOM   2238  OG  SER A 288      31.558  50.812  66.797  1.00 27.86
ATOM   2239  N   LEU A 289      29.519  48.791  65.088  1.00 23.04
ATOM   2240  CA  LEU A 289      28.247  48.129  65.338  1.00 21.77
ATOM   2241  C   LEU A 289      27.781  47.281  64.165  1.00 24.87
ATOM   2242  O   LEU A 289      26.595  46.999  63.993  1.00 23.49
ATOM   2243  CB  LEU A 289      27.169  49.134  65.733  1.00 21.62
ATOM   2244  CG  LEU A 289      27.655  50.085  66.804  1.00 24.32
ATOM   2245  CD1 LEU A 289      26.587  51.127  67.041  1.00 22.74
ATOM   2246  CD2 LEU A 289      27.900  49.299  68.090  1.00 23.03
ATOM   2247  N   SER A 290      28.735  46.867  63.358  1.00 22.75
ATOM   2248  CA  SER A 290      28.418  46.074  62.203  1.00 22.55
ATOM   2249  C   SER A 290      27.840  44.715  62.577  1.00 26.48
ATOM   2250  O   SER A 290      27.240  44.047  61.729  1.00 25.78
ATOM   2251  CB  SER A 290      29.619  45.960  61.293  1.00 23.90
ATOM   2252  OG  SER A 290      30.468  44.969  61.839  1.00 38.79
ATOM   2253  N   ASN A 291      27.990  44.285  63.845  1.00 19.29
ATOM   2254  CA  ASN A 291      27.407  42.997  64.158  1.00 19.36
ATOM   2255  C   ASN A 291      25.942  43.006  63.785  1.00 25.06
ATOM   2256  O   ASN A 291      25.372  41.981  63.398  1.00 23.17
ATOM   2257  CB  ASN A 291      27.578  42.553  65.608  1.00 16.45
ATOM   2258  CG  ASN A 291      26.714  43.390  66.488  1.00 21.86
ATOM   2259  OD1 ASN A 291      26.958  44.565  66.626  1.00 24.59
ATOM   2260  ND2 ASN A 291      25.646  42.794  67.012  1.00 27.34
ATOM   2261  N   VAL A 292      25.323  44.184  63.885  1.00 21.23
ATOM   2262  CA  VAL A 292      23.903  44.282  63.564  1.00 17.12
ATOM   2263  C   VAL A 292      23.651  43.926  62.113  1.00 22.88
ATOM   2264  O   VAL A 292      22.639  43.320  61.751  1.00 24.23
ATOM   2265  CB  VAL A 292      23.306  45.616  63.957  1.00 19.41
ATOM   2266  CG1 VAL A 292      21.861  45.660  63.492  1.00 19.16
ATOM   2267  CG2 VAL A 292      23.353  45.733  65.468  1.00 17.97
ATOM   2268  N   ILE A 293      24.599  44.292  61.269  1.00 20.25
ATOM   2269  CA  ILE A 293      24.465  43.971  59.867  1.00 20.49
ATOM   2270  C   ILE A 293      24.578  42.426  59.655  1.00 24.54
ATOM   2271  O   ILE A 293      23.801  41.780  58.903  1.00 22.05
ATOM   2272  CB  ILE A 293      25.488  44.762  59.038  1.00 24.97
ATOM   2273  CG1 ILE A 293      25.299  46.274  59.158  1.00 22.05
ATOM   2274  CG2 ILE A 293      25.301  44.415  57.576  1.00 29.49
ATOM   2275  CD1 ILE A 293      23.950  46.712  58.604  1.00 21.49
ATOM   2276  N   ALA A 294      25.543  40.386  60.345  1.00 17.90
ATOM   2277  CA  ALA A 294      25.743  40.386  60.233  1.00 17.67
ATOM   2278  C   ALA A 294      24.454  39.674  60.630  1.00 24.28
ATOM   2279  O   ALA A 294      24.014  38.666  60.041  1.00 21.85
ATOM   2280  CB  ALA A 294      26.896  39.956  61.139  1.00 16.43
ATOM   2281  N   HIS A 295      23.846  40.249  61.661  1.00 18.62
ATOM   2282  CA  HIS A 295      22.607  39.726  62.198  1.00 16.60
ATOM   2283  C   HIS A 295      21.525  39.710  61.129  1.00 18.03
ATOM   2284  O   HIS A 295      20.950  38.669  60.856  1.00 18.16
ATOM   2285  CB  HIS A 295      22.129  40.512  63.441  1.00 15.55
ATOM   2286  CG  HIS A 295      20.885  39.923  64.057  1.00 16.65
ATOM   2287  ND1 HIS A 295      20.954  38.987  65.079  1.00 17.50
ATOM   2288  CD2 HIS A 295      19.577  40.156  63.765  1.00 17.33
ATOM   2289  CE1 HIS A 295      19.700  38.672  65.367  1.00 17.73
ATOM   2290  NE2 HIS A 295      18.860  39.363  64.599  1.00 17.82
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ATOM 2291 N GLU A 296 21.252 40.868 60.547 1.00 14.96
ATOM 2292 CA GLU A 296 20.222 40.959 59.515 1.00 17.03
ATOM 2293 C GLU A 296 20.529 40.090 58.323 1.00 20.56
ATOM 2294 O GLU A 296 19.624 39.500 57.744 1.00 22.06
ATOM 2295 CB GLU A 296 19.900 42.402 59.052 1.00 18.78
ATOM 2296 CG GLU A 296 19.607 43.415 60.181 1.00 17.76
ATOM 2297 CD GLU A 296 18.765 42.905 61.324 1.00 26.07
ATOM 2298 OE1 GLU A 296 18.010 41.975 61.243 1.00 24.13
ATOM 2299 OE2 GLU A 296 18.874 43.640 62.413 1.00 42.10
ATOM 2300 N ILE A 297 21.799 40.001 57.957 1.00 16.85
ATOM 2301 CA ILE A 297 22.176 39.161 56.846 1.00 15.16
ATOM 2302 C ILE A 297 21.825 37.709 57.169 1.00 22.46
ATOM 2303 O ILE A 297 21.310 36.919 56.339 1.00 18.88
ATOM 2304 CB ILE A 297 23.676 39.273 56.680 1.00 17.58
ATOM 2305 CG1 ILE A 297 24.051 40.492 55.842 1.00 17.94
ATOM 2306 CG2 ILE A 297 24.194 38.001 56.047 1.00 16.21
ATOM 2307 CD1 ILE A 297 25.558 40.688 55.777 1.00 16.70
ATOM 2308 N SER A 298 22.126 37.334 58.419 1.00 16.91
ATOM 2309 CA SER A 298 21.857 35.952 58.836 1.00 16.01
ATOM 2310 C SER A 298 20.402 35.530 58.690 1.00 18.70
ATOM 2311 O SER A 298 20.129 34.360 58.355 1.00 18.32
ATOM 2312 CB SER A 298 22.365 35.647 60.222 1.00 18.04
ATOM 2313 OG SER A 298 23.759 35.843 60.212 1.00 25.50
ATOM 2314 N HIS A 299 19.496 36.484 58.951 1.00 16.60
ATOM 2315 CA HIS A 299 18.064 36.277 58.849 1.00 16.43
ATOM 2316 C HIS A 299 17.660 35.796 57.454 1.00 20.34
ATOM 2317 O HIS A 299 16.580 35.206 57.285 1.00 19.75
ATOM 2318 CB HIS A 299 17.252 37.538 59.241 1.00 15.73
ATOM 2319 CG HIS A 299 16.941 37.599 60.709 1.00 18.61
ATOM 2320 ND1 HIS A 299 16.410 36.500 61.393 1.00 18.57
ATOM 2321 CD2 HIS A 299 17.108 38.612 61.617 1.00 19.47
ATOM 2322 CE1 HIS A 299 16.265 36.863 62.660 1.00 16.96
ATOM 2323 NE2 HIS A 299 16.665 38.109 62.818 1.00 18.81
ATOM 2324 N SER A 300 18.516 36.060 56.460 1.00 16.40
ATOM 2325 CA SER A 300 18.231 35.641 55.084 1.00 19.81
ATOM 2326 C SER A 300 18.105 34.120 54.951 1.00 25.93
ATOM 2327 O SER A 300 17.626 33.597 53.936 1.00 23.71
ATOM 2328 CB SER A 300 19.240 36.184 54.064 1.00 27.33
ATOM 2329 OG SER A 300 19.323 37.591 54.135 1.00 26.20
ATOM 2330 N TRP A 301 18.564 33.415 55.994 1.00 23.64
ATOM 2331 CA TRP A 301 18.480 31.980 56.072 1.00 23.37
ATOM 2332 C TRP A 301 17.579 31.598 57.249 1.00 27.41
ATOM 2333 O TRP A 301 16.503 31.014 57.072 1.00 26.23
ATOM 2334 CB TRP A 301 19.866 31.334 56.222 1.00 22.22
ATOM 2335 CG TRP A 301 20.722 31.499 55.000 1.00 25.34
ATOM 2336 CD1 TRP A 301 20.897 30.577 53.999 1.00 28.73
ATOM 2337 CD2 TRP A 301 21.534 32.613 54.641 1.00 23.93
ATOM 2338 NE1 TRP A 301 21.743 31.051 53.032 1.00 25.58
ATOM 2339 CE2 TRP A 301 22.156 32.295 53.396 1.00 24.57
ATOM 2340 CE3 TRP A 301 21.778 33.847 55.244 1.00 24.02
ATOM 2341 CZ2 TRP A 301 23.010 33.177 52.743 1.00 23.11
ATOM 2342 CZ3 TRP A 301 22.609 34.727 54.586 1.00 25.68
ATOM 2343 CH2 TRP A 301 23.232 34.385 53.368 1.00 26.71
ATOM 2344 N THR A 302 18.030 31.964 58.469 1.00 23.13
ATOM 2345 CA THR A 302 17.299 31.646 59.698 1.00 20.44
ATOM 2346 C THR A 302 16.314 32.722 60.004 1.00 23.69
ATOM 2347 O THR A 302 16.673 33.739 60.555 1.00 23.66
ATOM 2348 CB THR A 302 18.238 31.327 60.891 1.00 27.33

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ATOM	2349	OG1	THR	A	302	19.190	32.355	61.052	1.00	21.35
ATOM	2350	CG2	THR	A	302	18.973	30.007	60.646	1.00	22.24
ATOM	2351	N	GLY	A	303	15.070	32.492	59.620	1.00	19.58
ATOM	2352	CA	GLY	A	303	14.004	33.460	59.800	1.00	16.06
ATOM	2353	C	GLY	A	303	13.286	33.658	58.468	1.00	19.82
ATOM	2354	O	GLY	A	303	12.092	33.388	58.365	1.00	19.83
ATOM	2355	N	ASN	A	304	14.017	34.119	57.444	1.00	16.86
ATOM	2356	CA	ASN	A	304	13.399	34.321	56.143	1.00	16.61
ATOM	2357	C	ASN	A	304	13.238	33.035	55.347	1.00	23.54
ATOM	2358	O	ASN	A	304	12.223	32.894	54.652	1.00	21.34
ATOM	2359	CB	ASN	A	304	14.043	35.434	55.308	1.00	14.57
ATOM	2360	CG	ASN	A	304	14.108	36.721	56.098	1.00	25.16
ATOM	2361	OD1	ASN	A	304	13.623	36.756	57.255	1.00	20.16
ATOM	2362	ND2	ASN	A	304	14.648	37.782	55.467	1.00	21.15
ATOM	2363	N	LEU	A	305	14.216	32.090	55.431	1.00	19.86
ATOM	2364	CA	LEU	A	305	14.049	30.819	54.669	1.00	20.27
ATOM	2365	C	LEU	A	305	13.273	29.810	55.496	1.00	24.31
ATOM	2366	O	LEU	A	305	12.282	29.233	55.044	1.00	21.45
ATOM	2367	CB	LEU	A	305	15.352	30.177	54.176	1.00	21.11
ATOM	2368	CG	LEU	A	305	15.786	30.655	52.809	1.00	25.81
ATOM	2369	CD1	LEU	A	305	17.105	29.986	52.465	1.00	23.53
ATOM	2370	CD2	LEU	A	305	14.713	30.354	51.766	1.00	25.44
ATOM	2371	N	VAL	A	306	13.766	29.600	56.715	1.00	19.66
ATOM	2372	CA	VAL	A	306	13.116	28.715	57.667	1.00	19.73
ATOM	2373	C	VAL	A	306	12.540	29.643	58.716	1.00	23.65
ATOM	2374	O	VAL	A	306	13.250	30.390	59.389	1.00	21.08
ATOM	2375	CB	VAL	A	306	13.955	27.552	58.203	1.00	24.56
ATOM	2376	CG1	VAL	A	306	15.439	27.775	58.065	1.00	25.21
ATOM	2377	CG2	VAL	A	306	13.546	27.071	59.593	1.00	23.12
ATOM	2378	N	THR	A	307	11.227	29.653	58.786	1.00	22.38
ATOM	2379	CA	THR	A	307	10.491	30.569	59.652	1.00	18.69
ATOM	2380	C	THR	A	307	9.776	29.908	60.803	1.00	19.89
ATOM	2381	O	THR	A	307	9.265	28.797	60.676	1.00	18.85
ATOM	2382	CB	THR	A	307	9.440	31.242	58.731	1.00	16.78
ATOM	2383	OG1	THR	A	307	10.099	31.705	57.575	1.00	21.78
ATOM	2384	CG2	THR	A	307	8.767	32.425	59.408	1.00	14.70
ATOM	2385	N	ASN	A	308	9.719	30.607	61.934	1.00	15.56
ATOM	2386	CA	ASN	A	308	9.007	30.068	63.069	1.00	14.26
ATOM	2387	C	ASN	A	308	7.534	29.908	62.638	1.00	17.86
ATOM	2388	O	ASN	A	308	6.972	30.743	61.911	1.00	19.31
ATOM	2389	CB	ASN	A	308	9.214	30.967	64.327	1.00	14.46
ATOM	2390	CG	ASN	A	308	9.026	32.476	64.197	1.00	23.32
ATOM	2391	OD1	ASN	A	308	9.548	33.245	65.006	1.00	23.73
ATOM	2392	ND2	ASN	A	308	8.230	32.940	63.230	1.00	20.68
ATOM	2393	N	LYS	A	309	6.901	28.821	62.988	1.00	16.51
ATOM	2394	CA	LYS	A	309	5.521	28.605	62.547	1.00	15.57
ATOM	2395	C	LYS	A	309	4.512	29.487	63.292	1.00	23.15
ATOM	2396	O	LYS	A	309	3.448	29.840	62.779	1.00	19.88
ATOM	2397	CB	LYS	A	309	5.157	27.141	62.555	1.00	18.63
ATOM	2398	CG	LYS	A	309	3.783	26.941	61.978	1.00	24.36
ATOM	2399	CD	LYS	A	309	3.276	25.543	62.196	1.00	44.21
ATOM	2400	CE	LYS	A	309	3.331	24.691	60.940	1.00	65.63
ATOM	2401	NZ	LYS	A	309	4.302	23.583	61.017	1.00	72.19
ATOM	2402	N	THR	A	310	4.859	29.849	64.521	1.00	18.08
ATOM	2403	CA	THR	A	310	4.057	30.752	65.326	1.00	14.95
ATOM	2404	C	THR	A	310	5.051	31.508	66.162	1.00	19.22
ATOM	2405	O	THR	A	310	6.183	31.035	66.364	1.00	19.33
ATOM	2406	CB	THR	A	310	2.999	30.101	66.243	1.00	18.83

ATOM	2407	OG1	THR	A	310	3.625	29.509	67.381	1.00	20.97
ATOM	2408	CG2	THR	A	310	2.148	29.053	65.492	1.00	22.03
ATOM	2409	N	TRP	A	311	4.640	32.649	66.669	1.00	16.83
ATOM	2410	CA	TRP	A	311	5.531	33.473	67.477	1.00	13.87
ATOM	2411	C	TRP	A	311	5.957	32.812	68.766	1.00	14.72
ATOM	2412	O	TRP	A	311	6.891	33.247	69.422	1.00	15.63
ATOM	2413	CB	TRP	A	311	4.904	34.837	67.698	1.00	12.94
ATOM	2414	CG	TRP	A	311	4.716	35.521	66.410	1.00	14.94
ATOM	2415	CD1	TRP	A	311	3.536	35.917	65.896	1.00	17.72
ATOM	2416	CD2	TRP	A	311	5.744	35.880	65.459	1.00	17.04
ATOM	2417	NE1	TRP	A	311	3.739	36.531	64.685	1.00	19.20
ATOM	2418	CE2	TRP	A	311	5.092	36.531	64.384	1.00	21.28
ATOM	2419	CE3	TRP	A	311	7.135	35.723	65.408	1.00	18.68
ATOM	2420	CZ2	TRP	A	311	5.792	37.000	63.260	1.00	18.99
ATOM	2421	CZ3	TRP	A	311	7.813	36.210	64.309	1.00	19.24
ATOM	2422	CH2	TRP	A	311	7.151	36.841	63.247	1.00	18.58
ATOM	2423	N	ASP	A	312	5.285	31.739	69.136	1.00	14.32
ATOM	2424	CA	ASP	A	312	5.677	31.022	70.355	1.00	16.52
ATOM	2425	C	ASP	A	312	7.057	30.348	70.182	1.00	20.97
ATOM	2426	O	ASP	A	312	7.728	30.022	71.141	1.00	16.88
ATOM	2427	CB	ASP	A	312	4.644	29.947	70.744	1.00	18.67
ATOM	2428	CG	ASP	A	312	3.331	30.475	71.277	1.00	24.42
ATOM	2429	OD1	ASP	A	312	3.179	31.578	71.761	1.00	26.54
ATOM	2430	OD2	ASP	A	312	2.390	29.579	71.220	1.00	32.52
ATOM	2431	N	HIS	A	313	7.447	30.132	68.919	1.00	16.31
ATOM	2432	CA	HIS	A	313	8.688	29.503	68.532	1.00	13.00
ATOM	2433	C	HIS	A	313	9.717	30.498	68.007	1.00	17.41
ATOM	2434	O	HIS	A	313	10.670	30.160	67.348	1.00	19.76
ATOM	2435	CB	HIS	A	313	8.337	28.435	67.454	1.00	14.66
ATOM	2436	CG	HIS	A	313	7.461	27.395	68.061	1.00	17.94
ATOM	2437	ND1	HIS	A	313	7.980	26.389	68.863	1.00	19.58
ATOM	2438	CD2	HIS	A	313	6.110	27.278	68.054	1.00	18.14
ATOM	2439	CE1	HIS	A	313	6.946	25.663	69.305	1.00	18.62
ATOM	2440	NE2	HIS	A	313	5.811	26.178	68.828	1.00	18.86
ATOM	2441	N	PHE	A	314	9.532	31.752	68.337	1.00	17.04
ATOM	2442	CA	PHE	A	314	10.391	32.850	67.928	1.00	14.60
ATOM	2443	C	PHE	A	314	11.861	32.591	68.188	1.00	14.03
ATOM	2444	O	PHE	A	314	12.756	33.089	67.509	1.00	15.80
ATOM	2445	CB	PHE	A	314	9.943	34.129	68.656	1.00	15.67
ATOM	2446	CG	PHE	A	314	10.618	35.416	68.185	1.00	17.93
ATOM	2447	CD1	PHE	A	314	10.734	35.717	66.826	1.00	17.79
ATOM	2448	CD2	PHE	A	314	11.111	36.344	69.116	1.00	17.04
ATOM	2449	CE1	PHE	A	314	11.336	36.910	66.418	1.00	17.88
ATOM	2450	CE2	PHE	A	314	11.721	37.538	68.720	1.00	17.77
ATOM	2451	CZ	PHE	A	314	11.824	37.822	67.358	1.00	15.05
ATOM	2452	N	TRP	A	315	12.145	31.812	69.177	1.00	14.30
ATOM	2453	CA	TRP	A	315	13.551	31.581	69.445	1.00	13.26
ATOM	2454	C	TRP	A	315	14.219	30.940	68.255	1.00	17.26
ATOM	2455	O	TRP	A	315	15.391	31.153	68.003	1.00	16.79
ATOM	2456	CB	TRP	A	315	13.805	30.797	70.763	1.00	13.36
ATOM	2457	CG	TRP	A	315	13.608	29.330	70.603	1.00	15.85
ATOM	2458	CD1	TRP	A	315	12.425	28.660	70.644	1.00	19.09
ATOM	2459	CD2	TRP	A	315	14.612	28.351	70.278	1.00	16.53
ATOM	2460	NE1	TRP	A	315	12.631	27.325	70.422	1.00	18.83
ATOM	2461	CE2	TRP	A	315	13.968	27.108	70.161	1.00	20.33
ATOM	2462	CE3	TRP	A	315	15.981	28.411	70.051	1.00	16.71
ATOM	2463	CZ2	TRP	A	315	14.671	25.924	69.865	1.00	18.62
ATOM	2464	CZ3	TRP	A	315	16.664	27.238	69.777	1.00	17.58

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ATOM   2465  CH2 TRP A 315      16.027  26.004  69.680  1.00 16.98
ATOM   2466  N   LEU A 316      13.490  30.115  67.508  1.00 16.82
ATOM   2467  CA  LEU A 316      14.126  29.478  66.367  1.00 16.28
ATOM   2468  C   LEU A 316      14.705  30.543  65.434  1.00 19.17
ATOM   2469  O   LEU A 316      15.820  30.419  64.920  1.00 20.97
ATOM   2470  CB  LEU A 316      13.125  28.610  65.569  1.00 15.83
ATOM   2471  CG  LEU A 316      12.628  27.362  66.276  1.00 18.57
ATOM   2472  CD1 LEU A 316      11.532  26.714  65.422  1.00 16.74
ATOM   2473  CD2 LEU A 316      13.784  26.387  66.501  1.00 15.84
ATOM   2474  N   ASN A 317      13.910  31.597  65.215  1.00 15.84
ATOM   2475  CA  ASN A 317      14.312  32.673  64.360  1.00 15.91
ATOM   2476  C   ASN A 317      15.543  33.378  64.907  1.00 22.96
ATOM   2477  O   ASN A 317      16.551  33.551  64.224  1.00 27.92
ATOM   2478  CB  ASN A 317      13.208  33.748  64.217  1.00 19.46
ATOM   2479  CG  ASN A 317      12.179  33.441  63.147  1.00 27.63
ATOM   2480  OD1 ASN A 317      11.822  32.273  62.889  1.00 24.23
ATOM   2481  ND2 ASN A 317      11.664  34.504  62.541  1.00 14.06
ATOM   2482  N   GLU A 318      15.430  33.801  66.155  1.00 17.32
ATOM   2483  CA  GLU A 318      16.489  34.567  66.808  1.00 15.82
ATOM   2484  C   GLU A 318      17.736  33.817  67.229  1.00 19.24
ATOM   2485  O   GLU A 318      18.843  34.264  66.959  1.00 19.69
ATOM   2486  CB  GLU A 318      15.966  35.546  67.890  1.00 14.50
ATOM   2487  CG  GLU A 318      14.904  36.470  67.308  1.00 16.88
ATOM   2488  CD  GLU A 318      15.432  37.337  66.197  1.00 20.90
ATOM   2489  OE1 GLU A 318      16.619  37.552  66.002  1.00 17.90
ATOM   2490  OE2 GLU A 318      14.481  37.883  65.486  1.00 20.95
ATOM   2491  N   GLY A 319      17.556  32.693  67.913  1.00 15.48
ATOM   2492  CA  GLY A 319      18.708  31.954  68.353  1.00 13.87
ATOM   2493  C   GLY A 319      19.645  31.601  67.227  1.00 15.36
ATOM   2494  O   GLY A 319      20.826  31.897  67.274  1.00 18.04
ATOM   2495  N   HIS A 320      19.124  30.919  66.223  1.00 16.60
ATOM   2496  CA  HIS A 320      19.938  30.512  65.119  1.00 19.46
ATOM   2497  C   HIS A 320      20.609  31.698  64.432  1.00 19.78
ATOM   2498  O   HIS A 320      21.721  31.601  63.957  1.00 18.89
ATOM   2499  CB  HIS A 320      19.103  29.719  64.090  1.00 21.04
ATOM   2500  CG  HIS A 320      18.719  28.404  64.640  1.00 23.23
ATOM   2501  ND1 HIS A 320      17.638  28.280  65.470  1.00 23.89
ATOM   2502  CD2 HIS A 320      19.295  27.187  64.491  1.00 27.03
ATOM   2503  CE1 HIS A 320      17.573  26.996  65.803  1.00 25.85
ATOM   2504  NE2 HIS A 320      18.546  26.309  65.223  1.00 26.09
ATOM   2505  N   THR A 321      19.880  32.798  64.361  1.00 17.39
ATOM   2506  CA  THR A 321      20.399  34.005  63.744  1.00 17.58
ATOM   2507  C   THR A 321      21.565  34.584  64.573  1.00 20.48
ATOM   2508  O   THR A 321      22.605  34.963  64.022  1.00 17.45
ATOM   2509  CB  THR A 321      19.301  35.065  63.457  1.00 22.10
ATOM   2510  OG1 THR A 321      18.319  34.491  62.600  1.00 17.40
ATOM   2511  CG2 THR A 321      19.936  36.287  62.748  1.00 20.37
ATOM   2512  N   VAL A 322      21.413  34.634  65.910  1.00 14.96
ATOM   2513  CA  VAL A 322      22.519  35.159  66.699  1.00 14.94
ATOM   2514  C   VAL A 322      23.695  34.220  66.563  1.00 17.53
ATOM   2515  O   VAL A 322      24.843  34.611  66.518  1.00 17.42
ATOM   2516  CB  VAL A 322      22.126  35.294  68.160  1.00 17.37
ATOM   2517  CG1 VAL A 322      23.359  35.613  68.986  1.00 13.17
ATOM   2518  CG2 VAL A 322      21.098  36.428  68.277  1.00 17.93
ATOM   2519  N   TYR A 323      23.383  32.948  66.490  1.00 16.41
ATOM   2520  CA  TYR A 323      24.419  31.949  66.340  1.00 14.67
ATOM   2521  C   TYR A 323      25.190  32.191  65.026  1.00 20.23
ATOM   2522  O   TYR A 323      26.409  32.217  64.981  1.00 18.57
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ATOM   2581  CB  CYS A 329      31.209  38.714  64.264  1.00 32.85
ATOM   2582  SG  CYS A 329      30.072  40.005  63.644  1.00 40.78
ATOM   2583  N   GLY A 330      33.018  35.970  63.905  1.00 25.01
ATOM   2584  CA  GLY A 330      34.160  35.189  64.308  1.00 24.77
ATOM   2585  C   GLY A 330      35.075  34.986  63.108  1.00 29.37
ATOM   2586  O   GLY A 330      36.297  34.999  63.254  1.00 26.53
ATOM   2587  N   ARG A 331      34.467  34.846  61.906  1.00 27.34
ATOM   2588  CA  ARG A 331      35.260  34.674  60.685  1.00 27.23
ATOM   2589  C   ARG A 331      36.073  35.939  60.376  1.00 29.63
ATOM   2590  O   ARG A 331      37.235  35.895  59.990  1.00 30.48
ATOM   2591  CB  ARG A 331      34.438  34.328  59.436  1.00 22.91
ATOM   2592  CG  ARG A 331      34.006  32.889  59.354  1.00 35.75
ATOM   2593  CD  ARG A 331      34.619  32.119  58.189  1.00 40.73
ATOM   2594  NE  ARG A 331      34.077  30.775  58.128  1.00 51.17
ATOM   2595  CZ  ARG A 331      33.916  29.992  59.215  1.00 76.62
ATOM   2596  NH1 ARG A 331      34.238  30.376  60.455  1.00 62.32
ATOM   2597  NH2 ARG A 331      33.419  28.763  59.067  1.00 59.87
ATOM   2598  N   LEU A 332      35.429  37.066  60.532  1.00 24.33
ATOM   2599  CA  LEU A 332      36.003  38.352  60.235  1.00 24.25
ATOM   2600  C   LEU A 332      37.005  38.862  61.245  1.00 28.60
ATOM   2601  O   LEU A 332      37.967  39.475  60.856  1.00 27.13
ATOM   2602  CB  LEU A 332      34.859  39.381  60.194  1.00 26.61
ATOM   2603  CG  LEU A 332      34.601  40.095  58.879  1.00 36.54
ATOM   2604  CD1 LEU A 332      35.152  39.339  57.682  1.00 36.23
ATOM   2605  CD2 LEU A 332      33.101  40.275  58.728  1.00 41.67
ATOM   2606  N   PHE A 333      36.751  38.659  62.546  1.00 24.79
ATOM   2607  CA  PHE A 333      37.582  39.191  63.600  1.00 21.10
ATOM   2608  C   PHE A 333      38.244  38.192  64.501  1.00 27.46
ATOM   2609  O   PHE A 333      39.012  38.603  65.373  1.00 29.51
ATOM   2610  CB  PHE A 333      36.818  40.254  64.422  1.00 22.40
ATOM   2611  CG  PHE A 333      36.095  41.213  63.494  1.00 25.14
ATOM   2612  CD1 PHE A 333      36.809  42.065  62.652  1.00 28.93
ATOM   2613  CD2 PHE A 333      34.703  41.228  63.408  1.00 30.64
ATOM   2614  CE1 PHE A 333      36.162  42.922  61.762  1.00 28.44
ATOM   2615  CE2 PHE A 333      34.030  42.078  62.528  1.00 32.97
ATOM   2616  CZ  PHE A 333      34.768  42.924  61.701  1.00 29.30
ATOM   2617  N   GLY A 334      37.949  36.900  64.345  1.00 19.09
ATOM   2618  CA  GLY A 334      38.595  35.883  65.190  1.00 18.79
ATOM   2619  C   GLY A 334      37.676  35.152  66.174  1.00 25.13
ATOM   2620  O   GLY A 334      36.715  35.726  66.682  1.00 22.90
ATOM   2621  N   GLU A 335      38.009  33.878  66.443  1.00 22.16
ATOM   2622  CA  GLU A 335      37.257  33.042  67.365  1.00 19.70
ATOM   2623  C   GLU A 335      37.224  33.669  68.711  1.00 22.27
ATOM   2624  O   GLU A 335      36.233  33.542  69.434  1.00 24.18
ATOM   2625  CB  GLU A 335      37.860  31.660  67.537  1.00 21.69
ATOM   2626  CG  GLU A 335      36.999  30.801  68.494  1.00 28.17
ATOM   2627  CD  GLU A 335      35.731  30.310  67.851  1.00 24.07
ATOM   2628  OE1 GLU A 335      35.182  30.867  66.895  1.00 28.59
ATOM   2629  OE2 GLU A 335      35.314  29.203  68.401  1.00 30.19
ATOM   2630  N   LYS A 336      38.307  34.334  69.032  1.00 17.40
ATOM   2631  CA  LYS A 336      38.409  35.015  70.303  1.00 19.68
ATOM   2632  C   LYS A 336      37.314  36.051  70.418  1.00 26.83
ATOM   2633  O   LYS A 336      36.694  36.265  71.470  1.00 27.03
ATOM   2634  CB  LYS A 336      39.767  35.672  70.537  1.00 18.78
ATOM   2635  CG  LYS A 336      40.753  34.643  71.090  1.00 24.32
ATOM   2636  CD  LYS A 336      42.194  35.114  71.209  1.00 26.26
ATOM   2637  CE  LYS A 336      43.158  33.937  71.421  1.00 62.48
ATOM   2638  NZ  LYS A 336      44.531  34.163  70.924  1.00 65.81
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ATOM	2639	N	PHE	A	337	37.082	36.725	69.329	1.00	18.53
ATOM	2640	CA	PHE	A	337	36.039	37.711	69.359	1.00	17.21
ATOM	2641	C	PHE	A	337	34.655	37.024	69.454	1.00	20.14
ATOM	2642	O	PHE	A	337	33.746	37.513	70.132	1.00	20.44
ATOM	2643	CB	PHE	A	337	36.127	38.575	68.102	1.00	18.16
ATOM	2644	CG	PHE	A	337	35.261	39.817	68.112	1.00	21.27
ATOM	2645	CD1	PHE	A	337	35.319	40.723	69.175	1.00	26.55
ATOM	2646	CD2	PHE	A	337	34.405	40.095	67.044	1.00	23.27
ATOM	2647	CE1	PHE	A	337	34.543	41.883	69.192	1.00	27.57
ATOM	2648	CE2	PHE	A	337	33.633	41.256	67.026	1.00	25.34
ATOM	2649	CZ	PHE	A	337	33.707	42.141	68.106	1.00	25.01
ATOM	2650	N	ARG	A	338	34.477	35.901	68.751	1.00	14.22
ATOM	2651	CA	ARG	A	338	33.217	35.202	68.800	1.00	14.00
ATOM	2652	C	ARG	A	338	32.926	34.834	70.234	1.00	20.03
ATOM	2653	O	ARG	A	338	31.809	34.975	70.702	1.00	19.54
ATOM	2654	CB	ARG	A	338	33.224	33.937	67.959	1.00	17.99
ATOM	2655	CG	ARG	A	338	31.869	33.248	67.913	1.00	18.25
ATOM	2656	CD	ARG	A	338	31.813	32.116	66.876	1.00	21.97
ATOM	2657	NE	ARG	A	338	32.426	30.901	67.397	1.00	16.11
ATOM	2658	CZ	ARG	A	338	31.790	29.798	67.805	1.00	23.47
ATOM	2659	NH1	ARG	A	338	30.473	29.632	67.750	1.00	18.92
ATOM	2660	NH2	ARG	A	338	32.514	28.791	68.274	1.00	21.62
ATOM	2661	N	HIS	A	339	33.937	34.373	70.942	1.00	14.98
ATOM	2662	CA	HIS	A	339	33.723	33.987	72.330	1.00	16.26
ATOM	2663	C	HIS	A	339	33.365	35.174	73.245	1.00	17.16
ATOM	2664	O	HIS	A	339	32.516	35.096	74.153	1.00	14.74
ATOM	2665	CB	HIS	A	339	34.928	33.190	72.871	1.00	16.32
ATOM	2666	CG	HIS	A	339	34.831	31.770	72.472	1.00	18.27
ATOM	2667	ND1	HIS	A	339	34.797	30.768	73.418	1.00	20.08
ATOM	2668	CD2	HIS	A	339	34.764	31.220	71.243	1.00	20.71
ATOM	2669	CE1	HIS	A	339	34.709	29.622	72.759	1.00	20.27
ATOM	2670	NE2	HIS	A	339	34.673	29.865	71.458	1.00	21.30
ATOM	2671	N	PHE	A	340	34.014	36.275	72.957	1.00	12.98
ATOM	2672	CA	PHE	A	340	33.817	37.499	73.664	1.00	14.03
ATOM	2673	C	PHE	A	340	32.362	37.955	73.510	1.00	19.81
ATOM	2674	O	PHE	A	340	31.671	38.339	74.478	1.00	17.18
ATOM	2675	CB	PHE	A	340	34.807	38.566	73.162	1.00	14.06
ATOM	2676	CG	PHE	A	340	34.520	39.960	73.671	1.00	16.25
ATOM	2677	CD1	PHE	A	340	34.983	40.378	74.921	1.00	14.61
ATOM	2678	CD2	PHE	A	340	33.804	40.871	72.889	1.00	20.48
ATOM	2679	CE1	PHE	A	340	34.738	41.654	75.420	1.00	11.01
ATOM	2680	CE2	PHE	A	340	33.545	42.161	73.362	1.00	21.48
ATOM	2681	CZ	PHE	A	340	34.016	42.538	74.621	1.00	17.20
ATOM	2682	N	ASN	A	341	31.884	37.895	72.283	1.00	14.94
ATOM	2683	CA	ASN	A	341	30.516	38.301	72.016	1.00	15.76
ATOM	2684	C	ASN	A	341	29.537	37.350	72.647	1.00	18.33
ATOM	2685	O	ASN	A	341	28.504	37.754	73.139	1.00	18.00
ATOM	2686	CB	ASN	A	341	30.279	38.402	70.503	1.00	17.58
ATOM	2687	CG	ASN	A	341	30.906	39.669	69.927	1.00	34.26
ATOM	2688	OD1	ASN	A	341	30.933	40.739	70.564	1.00	30.58
ATOM	2689	ND2	ASN	A	341	31.350	39.558	68.692	1.00	41.18
ATOM	2690	N	ALA	A	342	29.877	36.091	72.603	1.00	14.02
ATOM	2691	CA	ALA	A	342	29.052	35.043	73.180	1.00	16.90
ATOM	2692	C	ALA	A	342	28.841	35.269	74.664	1.00	19.23
ATOM	2693	O	ALA	A	342	27.716	35.180	75.158	1.00	16.20
ATOM	2694	CB	ALA	A	342	29.592	33.610	72.926	1.00	13.61
ATOM	2695	N	LEU	A	343	29.943	35.565	75.359	1.00	14.69
ATOM	2696	CA	LEU	A	343	29.932	35.784	76.802	1.00	14.25

ATOM 2697 C LEU A 343 29.145 37.001 77.172 1.00 15.26
ATOM 2698 O LEU A 343 28.437 36.987 78.144 1.00 17.28
ATOM 2699 CB LEU A 343 31.338 35.830 77.389 1.00 14.50
ATOM 2700 CG LEU A 343 31.392 35.853 78.888 1.00 19.65
ATOM 2701 CD1 LEU A 343 30.614 34.660 79.473 1.00 19.94
ATOM 2702 CD2 LEU A 343 32.862 35.680 79.227 1.00 19.54
ATOM 2703 N GLY A 344 29.269 38.039 76.392 1.00 13.33
ATOM 2704 CA GLY A 344 28.516 39.252 76.617 1.00 13.13
ATOM 2705 C GLY A 344 26.993 38.975 76.424 1.00 17.09
ATOM 2706 O GLY A 344 26.209 39.525 77.181 1.00 18.43
ATOM 2707 N GLY A 345 26.603 38.115 75.431 1.00 15.02
ATOM 2708 CA GLY A 345 25.228 37.703 75.168 1.00 12.69
ATOM 2709 C GLY A 345 24.699 37.028 76.459 1.00 19.95
ATOM 2710 O GLY A 345 23.583 37.271 76.883 1.00 19.12
ATOM 2711 N TRP A 346 25.515 36.189 77.135 1.00 16.29
ATOM 2712 CA TRP A 346 25.126 35.535 78.389 1.00 14.14
ATOM 2713 C TRP A 346 24.797 36.599 79.432 1.00 22.96
ATOM 2714 O TRP A 346 23.812 36.495 80.202 1.00 17.35
ATOM 2715 CB TRP A 346 26.221 34.583 78.935 1.00 13.13
ATOM 2716 CG TRP A 346 25.805 33.923 80.234 1.00 15.08
ATOM 2717 CD1 TRP A 346 26.003 34.405 81.508 1.00 16.98
ATOM 2718 CD2 TRP A 346 25.091 32.675 80.386 1.00 15.17
ATOM 2719 NE1 TRP A 346 25.469 33.520 82.420 1.00 16.47
ATOM 2720 CE2 TRP A 346 24.903 32.462 81.769 1.00 17.52
ATOM 2721 CE3 TRP A 346 24.593 31.728 79.481 1.00 15.86
ATOM 2722 CZ2 TRP A 346 24.228 31.326 82.257 1.00 16.80
ATOM 2723 CZ3 TRP A 346 23.949 30.619 79.970 1.00 17.27
ATOM 2724 CH2 TRP A 346 23.761 30.427 81.347 1.00 17.06
ATOM 2725 N GLY A 347 25.620 37.668 79.449 1.00 15.29
ATOM 2726 CA GLY A 347 25.395 38.744 80.397 1.00 13.67
ATOM 2727 C GLY A 347 24.083 39.473 80.141 1.00 17.65
ATOM 2728 O GLY A 347 23.415 39.859 81.083 1.00 18.50
ATOM 2729 N GLU A 348 23.728 39.660 78.868 1.00 16.50
ATOM 2730 CA GLU A 348 22.474 40.310 78.494 1.00 16.15
ATOM 2731 C GLU A 348 21.306 39.438 78.939 1.00 16.51
ATOM 2732 O GLU A 348 20.259 39.922 79.420 1.00 15.73
ATOM 2733 CB GLU A 348 22.445 40.591 76.996 1.00 17.40
ATOM 2734 CG GLU A 348 23.386 41.764 76.683 1.00 24.32
ATOM 2735 CD GLU A 348 22.918 43.017 77.378 1.00 50.61
ATOM 2736 OE1 GLU A 348 21.754 43.390 77.378 1.00 54.41
ATOM 2737 OE2 GLU A 348 23.877 43.633 78.016 1.00 27.35
ATOM 2738 N LEU A 349 21.525 38.115 78.807 1.00 14.77
ATOM 2739 CA LEU A 349 20.541 37.132 79.269 1.00 16.97
ATOM 2740 C LEU A 349 20.329 37.268 80.814 1.00 19.32
ATOM 2741 O LEU A 349 19.193 37.312 81.286 1.00 17.99
ATOM 2742 CB LEU A 349 20.915 35.681 78.924 1.00 15.80
ATOM 2743 CG LEU A 349 19.824 34.699 79.338 1.00 19.63
ATOM 2744 CD1 LEU A 349 18.534 34.994 78.565 1.00 17.40
ATOM 2745 CD2 LEU A 349 20.304 33.265 79.088 1.00 21.23
ATOM 2746 N GLN A 350 21.405 37.344 81.603 1.00 11.38
ATOM 2747 CA GLN A 350 21.262 37.507 83.026 1.00 13.30
ATOM 2748 C GLN A 350 20.449 38.753 83.318 1.00 22.11
ATOM 2749 O GLN A 350 19.613 38.805 84.221 1.00 23.26
ATOM 2750 CB GLN A 350 22.637 37.748 83.635 1.00 17.68
ATOM 2751 CG GLN A 350 23.590 36.553 83.432 1.00 17.78
ATOM 2752 CD GLN A 350 24.971 36.862 84.006 1.00 21.19
ATOM 2753 OE1 GLN A 350 25.561 36.059 84.728 1.00 29.39
ATOM 2754 NE2 GLN A 350 25.485 38.043 83.712 1.00 20.71

Deposited on 06/05/2003

ATOM	2755	N	ASN	A	351	20.711	39.786	82.539	1.00 16.08
ATOM	2756	CA	ASN	A	351	20.019	41.023	82.694	1.00 15.68
ATOM	2757	C	ASN	A	351	18.530	40.851	82.433	1.00 22.65
ATOM	2758	O	ASN	A	351	17.688	41.307	83.234	1.00 18.44
ATOM	2759	CB	ASN	A	351	20.577	42.095	81.736	1.00 18.73
ATOM	2760	CG	ASN	A	351	21.934	42.637	82.197	1.00 14.85
ATOM	2761	OD1	ASN	A	351	22.426	42.257	83.267	1.00 23.05
ATOM	2762	ND2	ASN	A	351	22.551	43.464	81.352	1.00 19.82
ATOM	2763	N	SER	A	352	18.195	40.218	81.299	1.00 17.59
ATOM	2764	CA	SER	A	352	16.788	40.020	80.979	1.00 16.98
ATOM	2765	C	SER	A	352	16.077	39.199	82.034	1.00 19.09
ATOM	2766	O	SER	A	352	14.907	39.453	82.392	1.00 21.78
ATOM	2767	CB	SER	A	352	16.621	39.355	79.633	1.00 25.92
ATOM	2768	OG	SER	A	352	16.959	40.271	78.629	1.00 39.51
ATOM	2769	N	VAL	A	353	16.788	38.181	82.510	1.00 15.36
ATOM	2770	CA	VAL	A	353	16.243	37.318	83.544	1.00 16.80
ATOM	2771	C	VAL	A	353	15.963	38.106	84.810	1.00 23.73
ATOM	2772	O	VAL	A	353	14.900	37.966	85.420	1.00 19.97
ATOM	2773	CB	VAL	A	353	17.083	36.073	83.808	1.00 18.09
ATOM	2774	CG1	VAL	A	353	16.540	35.288	84.989	1.00 18.20
ATOM	2775	CG2	VAL	A	353	17.021	35.169	82.571	1.00 19.40
ATOM	2776	N	LYS	A	354	16.930	38.952	85.184	1.00 19.41
ATOM	2777	CA	LYS	A	354	16.804	39.739	86.375	1.00 18.40
ATOM	2778	C	LYS	A	354	15.648	40.702	86.261	1.00 25.72
ATOM	2779	O	LYS	A	354	14.806	40.856	87.147	1.00 23.94
ATOM	2780	CB	LYS	A	354	18.090	40.464	86.695	1.00 25.22
ATOM	2781	CG	LYS	A	354	18.027	41.168	88.047	1.00 42.11
ATOM	2782	CD	LYS	A	354	19.202	42.103	88.264	1.00 54.17
ATOM	2783	CE	LYS	A	354	19.258	42.717	89.654	1.00 46.55
ATOM	2784	NZ	LYS	A	354	20.438	43.583	89.846	1.00 64.93
ATOM	2785	N	THR	A	355	15.596	41.356	85.140	1.00 21.59
ATOM	2786	CA	THR	A	355	14.538	42.307	84.882	1.00 21.16
ATOM	2787	C	THR	A	355	13.127	41.703	85.000	1.00 26.96
ATOM	2788	O	THR	A	355	12.280	42.192	85.741	1.00 21.59
ATOM	2789	CB	THR	A	355	14.786	42.962	83.520	1.00 26.90
ATOM	2790	OG1	THR	A	355	15.896	43.824	83.628	1.00 29.56
ATOM	2791	CG2	THR	A	355	13.546	43.707	83.039	1.00 41.34
ATOM	2792	N	PHE	A	356	12.855	40.607	84.285	1.00 22.14
ATOM	2793	CA	PHE	A	356	11.550	39.993	84.349	1.00 18.19
ATOM	2794	C	PHE	A	356	11.308	39.245	85.600	1.00 16.86
ATOM	2795	O	PHE	A	356	10.177	39.093	85.989	1.00 19.45
ATOM	2796	CB	PHE	A	356	11.490	38.867	83.333	1.00 22.01
ATOM	2797	CG	PHE	A	356	11.175	39.327	81.967	1.00 24.96
ATOM	2798	CD1	PHE	A	356	10.016	40.069	81.747	1.00 31.09
ATOM	2799	CD2	PHE	A	356	11.992	38.977	80.890	1.00 27.87
ATOM	2800	CE1	PHE	A	356	9.686	40.514	80.466	1.00 34.87
ATOM	2801	CE2	PHE	A	356	11.658	39.390	79.598	1.00 35.46
ATOM	2802	CZ	PHE	A	356	10.509	40.161	79.391	1.00 36.07
ATOM	2803	N	GLY	A	357	12.355	38.671	86.149	1.00 13.91
ATOM	2804	CA	GLY	A	357	12.250	37.789	87.324	1.00 14.94
ATOM	2805	C	GLY	A	357	12.506	36.315	86.859	1.00 18.85
ATOM	2806	O	GLY	A	357	12.081	35.910	85.757	1.00 20.96
ATOM	2807	N	GLU	A	358	13.188	35.511	87.690	1.00 14.21
ATOM	2808	CA	GLU	A	358	13.548	34.176	87.315	1.00 18.10
ATOM	2809	C	GLU	A	358	12.406	33.208	87.139	1.00 22.35
ATOM	2810	O	GLU	A	358	12.594	32.093	86.599	1.00 18.73
ATOM	2811	CB	GLU	A	358	14.620	33.586	88.215	1.00 20.85
ATOM	2812	CG	GLU	A	358	14.021	33.077	89.527	1.00 35.73

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ATOM   2813  CD  GLU A 358      15.008  33.053  90.661  1.00 64.53
ATOM   2814  OE1 GLU A 358      16.138  32.655  90.520  1.00 38.29
ATOM   2815  OE2 GLU A 358      14.517  33.496  91.801  1.00 89.00
ATOM   2816  N   THR A 359      11.222  33.608  87.576  1.00 16.44
ATOM   2817  CA  THR A 359      10.112  32.687  87.414  1.00 17.09
ATOM   2818  C   THR A 359       9.142  33.199  86.407  1.00 18.44
ATOM   2819  O   THR A 359       8.076  32.662  86.290  1.00 19.27
ATOM   2820  CB  THR A 359       9.359  32.432  88.713  1.00 21.12
ATOM   2821  OG1 THR A 359       8.721  33.635  89.097  1.00 20.02
ATOM   2822  CG2 THR A 359      10.295  31.956  89.804  1.00 20.69
ATOM   2823  N   HIS A 360       9.516  34.245  85.712  1.00 13.71
ATOM   2824  CA  HIS A 360       8.666  34.841  84.723  1.00 14.97
ATOM   2825  C   HIS A 360       8.553  33.974  83.467  1.00 20.83
ATOM   2826  O   HIS A 360       9.543  33.532  82.898  1.00 18.41
ATOM   2827  CB  HIS A 360       9.171  36.224  84.380  1.00 16.95
ATOM   2828  CG  HIS A 360       8.149  36.963  83.639  1.00 19.78
ATOM   2829  ND1 HIS A 360       7.496  38.077  84.178  1.00 23.17
ATOM   2830  CD2 HIS A 360       7.657  36.712  82.406  1.00 21.01
ATOM   2831  CE1 HIS A 360       6.622  38.481  83.251  1.00 22.01
ATOM   2832  NE2 HIS A 360       6.711  37.664  82.171  1.00 24.05
ATOM   2833  N   PRO A 361       7.318  33.722  83.043  1.00 21.94
ATOM   2834  CA  PRO A 361       7.096  32.895  81.876  1.00 21.68
ATOM   2835  C   PRO A 361       7.728  33.450  80.602  1.00 23.08
ATOM   2836  O   PRO A 361       7.928  32.715  79.648  1.00 19.72
ATOM   2837  CB  PRO A 361       5.585  32.700  81.755  1.00 22.85
ATOM   2838  CG  PRO A 361       5.027  33.012  83.134  1.00 28.59
ATOM   2839  CD  PRO A 361       6.048  33.917  83.803  1.00 21.80
ATOM   2840  N   PHE A 362       8.055  34.731  80.582  1.00 20.70
ATOM   2841  CA  PHE A 362       8.690  35.270  79.394  1.00 22.53
ATOM   2842  C   PHE A 362      10.150  34.915  79.350  1.00 20.33
ATOM   2843  O   PHE A 362      10.817  35.272  78.398  1.00 21.38
ATOM   2844  CB  PHE A 362       8.534  36.768  79.124  1.00 25.38
ATOM   2845  CG  PHE A 362       7.103  37.248  79.022  1.00 28.56
ATOM   2846  CD1 PHE A 362       6.042  36.377  78.783  1.00 29.73
ATOM   2847  CD2 PHE A 362       6.826  38.604  79.181  1.00 29.51
ATOM   2848  CE1 PHE A 362       4.730  36.849  78.687  1.00 29.17
ATOM   2849  CE2 PHE A 362       5.517  39.086  79.106  1.00 32.58
ATOM   2850  CZ  PHE A 362       4.465  38.211  78.869  1.00 27.13
ATOM   2851  N   THR A 363      10.641  34.241  80.382  1.00 17.45
ATOM   2852  CA  THR A 363      12.032  33.825  80.375  1.00 16.26
ATOM   2853  C   THR A 363      12.190  32.400  79.820  1.00 17.12
ATOM   2854  O   THR A 363      13.271  31.848  79.771  1.00 17.12
ATOM   2855  CB  THR A 363      12.718  33.967  81.730  1.00 15.97
ATOM   2856  OG1 THR A 363      12.001  33.241  82.735  1.00 18.45
ATOM   2857  CG2 THR A 363      12.820  35.453  82.059  1.00 13.79
ATOM   2858  N   LYS A 364      11.100  31.782  79.410  1.00 13.55
ATOM   2859  CA  LYS A 364      11.179  30.425  78.850  1.00 12.81
ATOM   2860  C   LYS A 364      11.607  30.536  77.406  1.00 17.59
ATOM   2861  O   LYS A 364      11.315  31.518  76.718  1.00 18.05
ATOM   2862  CB  LYS A 364       9.807  29.741  78.851  1.00 14.15
ATOM   2863  CG  LYS A 364       9.285  29.478  80.259  1.00 22.73
ATOM   2864  CD  LYS A 364       7.787  29.209  80.302  1.00 24.91
ATOM   2865  CE  LYS A 364       7.322  28.851  81.703  1.00 24.87
ATOM   2866  NZ  LYS A 364       6.143  27.983  81.688  1.00 36.58
ATOM   2867  N   LEU A 365      12.274  29.534  76.906  1.00 14.53
ATOM   2868  CA  LEU A 365      12.667  29.596  75.511  1.00 16.17
ATOM   2869  C   LEU A 365      11.421  29.458  74.619  1.00 19.12
ATOM   2870  O   LEU A 365      11.229  30.201  73.656  1.00 19.11
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ATOM 2871 CB LEU A 365 13.718 28.500 75.236 1.00 16.49
ATOM 2872 CG LEU A 365 14.458 28.603 73.913 1.00 21.42
ATOM 2873 CD1 LEU A 365 15.106 29.973 73.789 1.00 17.49
ATOM 2874 CD2 LEU A 365 15.537 27.525 73.929 1.00 21.26
ATOM 2875 N VAL A 366 10.560 28.499 74.950 1.00 16.34
ATOM 2876 CA VAL A 366 9.318 28.315 74.230 1.00 18.86
ATOM 2877 C VAL A 366 8.188 28.979 75.059 1.00 22.69
ATOM 2878 O VAL A 366 7.931 28.576 76.180 1.00 21.37
ATOM 2879 CB VAL A 366 9.012 26.855 73.923 1.00 22.73
ATOM 2880 CG1 VAL A 366 7.741 26.775 73.070 1.00 20.71
ATOM 2881 CG2 VAL A 366 10.189 26.241 73.158 1.00 22.18
ATOM 2882 N VAL A 367 7.537 30.015 74.521 1.00 20.21
ATOM 2883 CA VAL A 367 6.487 30.723 75.263 1.00 21.75
ATOM 2884 C VAL A 367 5.071 30.530 74.765 1.00 31.76
ATOM 2885 O VAL A 367 4.818 30.099 73.637 1.00 33.07
ATOM 2886 CB VAL A 367 6.737 32.204 75.201 1.00 24.64
ATOM 2887 CG1 VAL A 367 8.102 32.527 75.814 1.00 23.06
ATOM 2888 CG2 VAL A 367 6.628 32.633 73.739 1.00 25.37
ATOM 2889 N ASP A 368 4.134 30.913 75.631 1.00 26.47
ATOM 2890 CA ASP A 368 2.717 30.841 75.295 1.00 24.49
ATOM 2891 C ASP A 368 2.203 32.251 75.126 1.00 19.48
ATOM 2892 O ASP A 368 1.991 32.972 76.069 1.00 21.34
ATOM 2893 CB ASP A 368 1.904 30.081 76.365 1.00 28.12
ATOM 2894 CG ASP A 368 0.482 29.882 75.908 1.00 37.10
ATOM 2895 OD1 ASP A 368 0.023 30.365 74.885 1.00 30.33
ATOM 2896 OD2 ASP A 368 -0.202 29.155 76.725 1.00 34.29
ATOM 2897 N LEU A 369 2.046 32.675 73.915 1.00 17.90
ATOM 2898 CA LEU A 369 1.611 34.025 73.688 1.00 19.61
ATOM 2899 C LEU A 369 0.107 34.208 73.712 1.00 23.98
ATOM 2900 O LEU A 369 -0.419 35.236 73.282 1.00 27.35
ATOM 2901 CB LEU A 369 2.202 34.607 72.383 1.00 19.83
ATOM 2902 CG LEU A 369 3.702 34.866 72.488 1.00 24.77
ATOM 2903 CD1 LEU A 369 4.217 35.374 71.135 1.00 20.98
ATOM 2904 CD2 LEU A 369 3.998 35.838 73.626 1.00 23.40
ATOM 2905 N THR A 370 -0.592 33.220 74.199 1.00 22.21
ATOM 2906 CA THR A 370 -2.033 33.349 74.254 1.00 22.43
ATOM 2907 C THR A 370 -2.440 34.563 75.093 1.00 28.86
ATOM 2908 O THR A 370 -2.147 34.665 76.295 1.00 27.57
ATOM 2909 CB THR A 370 -2.678 32.128 74.916 1.00 31.88
ATOM 2910 OG1 THR A 370 -2.352 30.960 74.212 1.00 35.39
ATOM 2911 CG2 THR A 370 -4.183 32.323 74.893 1.00 34.18
ATOM 2912 N ASP A 371 -3.130 35.489 74.439 1.00 28.25
ATOM 2913 CA ASP A 371 -3.595 36.685 75.107 1.00 27.92
ATOM 2914 C ASP A 371 -2.498 37.603 75.529 1.00 28.33
ATOM 2915 O ASP A 371 -2.665 38.374 76.445 1.00 25.40
ATOM 2916 CB ASP A 371 -4.508 36.369 76.293 1.00 32.10
ATOM 2917 CG ASP A 371 -5.847 35.839 75.826 1.00 46.60
ATOM 2918 OD1 ASP A 371 -6.474 36.318 74.880 1.00 45.97
ATOM 2919 OD2 ASP A 371 -6.232 34.791 76.516 1.00 45.84
ATOM 2920 N ILE A 372 -1.389 37.540 74.841 1.00 25.39
ATOM 2921 CA ILE A 372 -0.306 38.436 75.177 1.00 24.43
ATOM 2922 C ILE A 372 0.113 39.165 73.929 1.00 24.31
ATOM 2923 O ILE A 372 0.327 38.512 72.915 1.00 26.21
ATOM 2924 CB ILE A 372 0.879 37.637 75.654 1.00 28.18
ATOM 2925 CG1 ILE A 372 0.606 37.086 77.045 1.00 26.69
ATOM 2926 CG2 ILE A 372 2.092 38.554 75.644 1.00 31.78
ATOM 2927 CD1 ILE A 372 0.652 38.193 78.085 1.00 46.61
ATOM 2928 N ASP A 373 0.225 40.488 73.993 1.00 22.30

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ATOM   2929  CA  ASP A 373       0.645  41.274  72.826  1.00 21.27
ATOM   2930  C   ASP A 373       2.131  41.004  72.577  1.00 25.86
ATOM   2931  O   ASP A 373       2.974  41.293  73.442  1.00 23.22
ATOM   2932  CB  ASP A 373       0.424  42.793  73.054  1.00 22.31
ATOM   2933  CG  ASP A 373       0.891  43.654  71.883  1.00 29.73
ATOM   2934  OD1 ASP A 373       1.515  43.194  70.941  1.00 31.76
ATOM   2935  OD2 ASP A 373       0.555  44.930  71.969  1.00 27.86
ATOM   2936  N   PRO A 374       2.484  40.463  71.409  1.00 22.50
ATOM   2937  CA  PRO A 374       3.889  40.171  71.166  1.00 23.16
ATOM   2938  C   PRO A 374       4.850  41.301  71.504  1.00 24.89
ATOM   2939  O   PRO A 374       5.888  41.089  72.161  1.00 21.00
ATOM   2940  CB  PRO A 374       3.997  39.698  69.728  1.00 23.24
ATOM   2941  CG  PRO A 374       2.640  39.097  69.454  1.00 24.05
ATOM   2942  CD  PRO A 374       1.667  39.848  70.346  1.00 21.54
ATOM   2943  N   ASP A 375       4.497  42.498  71.044  1.00 20.29
ATOM   2944  CA  ASP A 375       5.313  43.679  71.309  1.00 19.41
ATOM   2945  C   ASP A 375       5.632  43.849  72.789  1.00 22.07
ATOM   2946  O   ASP A 375       6.619  44.453  73.160  1.00 22.53
ATOM   2947  CB  ASP A 375       4.539  44.916  70.867  1.00 18.53
ATOM   2948  CG  ASP A 375       4.597  45.029  69.394  1.00 26.47
ATOM   2949  OD1 ASP A 375       5.523  44.560  68.735  1.00 24.70
ATOM   2950  OD2 ASP A 375       3.591  45.714  68.900  1.00 27.57
ATOM   2951  N   VAL A 376       4.752  43.349  73.624  1.00 18.89
ATOM   2952  CA  VAL A 376       4.911  43.461  75.053  1.00 20.94
ATOM   2953  C   VAL A 376       5.827  42.362  75.581  1.00 23.60
ATOM   2954  O   VAL A 376       6.514  42.551  76.560  1.00 22.26
ATOM   2955  CB  VAL A 376       3.530  43.386  75.725  1.00 24.27
ATOM   2956  CG1 VAL A 376       3.614  42.799  77.113  1.00 24.15
ATOM   2957  CG2 VAL A 376       2.846  44.741  75.763  1.00 21.88
ATOM   2958  N   ALA A 377       5.841  41.202  74.924  1.00 20.52
ATOM   2959  CA  ALA A 377       6.671  40.081  75.380  1.00 19.34
ATOM   2960  C   ALA A 377       8.119  40.144  74.936  1.00 21.06
ATOM   2961  O   ALA A 377       8.995  39.531  75.509  1.00 20.54
ATOM   2962  CB  ALA A 377       6.077  38.746  74.916  1.00 19.29
ATOM   2963  N   TYR A 378       8.349  40.881  73.894  1.00 18.62
ATOM   2964  CA  TYR A 378       9.653  41.015  73.291  1.00 18.37
ATOM   2965  C   TYR A 378      10.771  41.278  74.262  1.00 23.29
ATOM   2966  O   TYR A 378      10.680  42.178  75.069  1.00 21.02
ATOM   2967  CB  TYR A 378       9.627  42.149  72.292  1.00 18.13
ATOM   2968  CG  TYR A 378      10.914  42.258  71.523  1.00 18.41
ATOM   2969  CD1 TYR A 378      11.271  41.249  70.629  1.00 18.40
ATOM   2970  CD2 TYR A 378      11.752  43.361  71.682  1.00 17.09
ATOM   2971  CE1 TYR A 378      12.447  41.326  69.885  1.00 16.77
ATOM   2972  CE2 TYR A 378      12.933  43.450  70.942  1.00 17.00
ATOM   2973  CZ  TYR A 378      13.280  42.433  70.048  1.00 19.25
ATOM   2974  OH  TYR A 378      14.460  42.510  69.311  1.00 20.79
ATOM   2975  N   SER A 379      11.853  40.510  74.137  1.00 17.96
ATOM   2976  CA  SER A 379      13.014  40.665  74.999  1.00 16.74
ATOM   2977  C   SER A 379      14.186  39.980  74.376  1.00 18.88
ATOM   2978  O   SER A 379      14.077  39.440  73.300  1.00 17.88
ATOM   2979  CB  SER A 379      12.818  40.037  76.382  1.00 18.10
ATOM   2980  OG  SER A 379      12.971  38.616  76.326  1.00 17.76
ATOM   2981  N   SER A 380      15.304  39.989  75.093  1.00 17.79
ATOM   2982  CA  SER A 380      16.566  39.332  74.679  1.00 17.84
ATOM   2983  C   SER A 380      16.535  37.832  74.918  1.00 19.09
ATOM   2984  O   SER A 380      17.373  37.094  74.438  1.00 19.70
ATOM   2985  CB  SER A 380      17.713  39.827  75.547  1.00 22.61
ATOM   2986  OG  SER A 380      18.062  41.128  75.175  1.00 37.65
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ATOM 2987 N VAL A 381 15.584 37.373 75.701 1.00 15.92
ATOM 2988 CA VAL A 381 15.506 35.970 75.994 1.00 13.28
ATOM 2989 C VAL A 381 15.563 35.076 74.757 1.00 17.08
ATOM 2990 O VAL A 381 16.405 34.186 74.689 1.00 16.24
ATOM 2991 CB VAL A 381 14.307 35.616 76.897 1.00 14.10
ATOM 2992 CG1 VAL A 381 14.159 34.101 77.046 1.00 12.50
ATOM 2993 CG2 VAL A 381 14.465 36.274 78.251 1.00 13.34
ATOM 2994 N PRO A 382 14.662 35.231 73.784 1.00 14.08
ATOM 2995 CA PRO A 382 14.745 34.310 72.672 1.00 14.26
ATOM 2996 C PRO A 382 16.092 34.383 71.956 1.00 19.53
ATOM 2997 O PRO A 382 16.583 33.396 71.390 1.00 17.52
ATOM 2998 CB PRO A 382 13.556 34.579 71.743 1.00 13.55
ATOM 2999 CG PRO A 382 13.121 35.968 72.129 1.00 16.51
ATOM 3000 CD PRO A 382 13.525 36.140 73.581 1.00 13.04
ATOM 3001 N TYR A 383 16.712 35.556 71.988 1.00 14.90
ATOM 3002 CA TYR A 383 17.995 35.727 71.326 1.00 15.56
ATOM 3003 C TYR A 383 19.142 35.019 72.036 1.00 19.49
ATOM 3004 O TYR A 383 19.942 34.276 71.454 1.00 18.21
ATOM 3005 CB TYR A 383 18.371 37.226 71.280 1.00 16.26
ATOM 3006 CG TYR A 383 17.518 38.078 70.360 1.00 17.31
ATOM 3007 CD1 TYR A 383 16.257 38.519 70.768 1.00 17.98
ATOM 3008 CD2 TYR A 383 17.984 38.490 69.106 1.00 15.67
ATOM 3009 CE1 TYR A 383 15.462 39.310 69.936 1.00 17.12
ATOM 3010 CE2 TYR A 383 17.202 39.274 68.259 1.00 17.10
ATOM 3011 CZ TYR A 383 15.940 39.688 68.686 1.00 22.02
ATOM 3012 OH TYR A 383 15.158 40.465 67.893 1.00 18.91
ATOM 3013 N GLU A 384 19.227 35.308 73.306 1.00 14.23
ATOM 3014 CA GLU A 384 20.301 34.842 74.136 1.00 12.36
ATOM 3015 C GLU A 384 20.128 33.494 74.752 1.00 17.78
ATOM 3016 O GLU A 384 21.096 32.756 74.866 1.00 14.92
ATOM 3017 CB GLU A 384 20.707 35.952 75.093 1.00 12.48
ATOM 3018 CG GLU A 384 21.058 37.217 74.275 1.00 15.08
ATOM 3019 CD GLU A 384 22.403 37.098 73.589 1.00 31.19
ATOM 3020 OE1 GLU A 384 23.132 36.113 73.647 1.00 22.19
ATOM 3021 OE2 GLU A 384 22.720 38.171 72.935 1.00 23.77
ATOM 3022 N LYS A 385 18.897 33.118 75.133 1.00 16.58
ATOM 3023 CA LYS A 385 18.771 31.759 75.664 1.00 16.36
ATOM 3024 C LYS A 385 18.891 30.809 74.458 1.00 16.81
ATOM 3025 O LYS A 385 19.449 29.705 74.540 1.00 15.97
ATOM 3026 CB LYS A 385 17.514 31.508 76.512 1.00 14.73
ATOM 3027 CG LYS A 385 17.557 30.142 77.175 1.00 12.89
ATOM 3028 CD LYS A 385 16.295 29.802 77.949 1.00 25.17
ATOM 3029 CE LYS A 385 16.211 30.454 79.301 1.00 20.12
ATOM 3030 NZ LYS A 385 15.202 29.829 80.175 1.00 16.04
ATOM 3031 N GLY A 386 18.374 31.286 73.316 1.00 12.80
ATOM 3032 CA GLY A 386 18.421 30.480 72.112 1.00 11.62
ATOM 3033 C GLY A 386 19.866 30.250 71.689 1.00 17.22
ATOM 3034 O GLY A 386 20.289 29.130 71.430 1.00 17.34
ATOM 3035 N PHE A 387 20.623 31.333 71.580 1.00 14.79
ATOM 3036 CA PHE A 387 22.018 31.218 71.214 1.00 15.40
ATOM 3037 C PHE A 387 22.766 30.353 72.238 1.00 19.58
ATOM 3038 O PHE A 387 23.557 29.502 71.884 1.00 19.03
ATOM 3039 CB PHE A 387 22.686 32.579 71.045 1.00 14.79
ATOM 3040 CG PHE A 387 24.167 32.431 70.988 1.00 13.37
ATOM 3041 CD1 PHE A 387 24.895 32.181 69.815 1.00 14.32
ATOM 3042 CD2 PHE A 387 24.842 32.519 72.202 1.00 14.90
ATOM 3043 CE1 PHE A 387 26.287 32.043 69.857 1.00 12.12
ATOM 3044 CE2 PHE A 387 26.233 32.407 72.259 1.00 15.96

ATOM 3045 CZ PHE A 387 26.954 32.148 71.086 1.00 14.94
ATOM 3046 N ALA A 388 22.487 30.533 73.522 1.00 16.65
ATOM 3047 CA ALA A 388 23.138 29.706 74.541 1.00 17.04
ATOM 3048 C ALA A 388 22.865 28.231 74.291 1.00 19.93
ATOM 3049 O ALA A 388 23.775 27.412 74.356 1.00 20.75
ATOM 3050 CB ALA A 388 22.644 30.086 75.936 1.00 17.04
ATOM 3051 N LEU A 389 21.595 27.878 74.017 1.00 13.52
ATOM 3052 CA LEU A 389 21.270 26.481 73.746 1.00 12.75
ATOM 3053 C LEU A 389 22.142 25.954 72.616 1.00 16.14
ATOM 3054 O LEU A 389 22.804 24.921 72.761 1.00 15.90
ATOM 3055 CB LEU A 389 19.792 26.354 73.374 1.00 11.62
ATOM 3056 CG LEU A 389 19.364 24.983 72.909 1.00 15.19
ATOM 3057 CD1 LEU A 389 19.839 23.930 73.914 1.00 16.82
ATOM 3058 CD2 LEU A 389 17.839 24.969 72.839 1.00 15.73
ATOM 3059 N LEU A 390 22.149 26.690 71.503 1.00 12.97
ATOM 3060 CA LEU A 390 22.939 26.331 70.348 1.00 13.79
ATOM 3061 C LEU A 390 24.426 26.247 70.629 1.00 23.60
ATOM 3062 O LEU A 390 25.099 25.328 70.136 1.00 22.90
ATOM 3063 CB LEU A 390 22.718 27.238 69.141 1.00 12.43
ATOM 3064 CG LEU A 390 21.238 27.308 68.754 1.00 16.53
ATOM 3065 CD1 LEU A 390 21.063 28.259 67.570 1.00 17.80
ATOM 3066 CD2 LEU A 390 20.706 25.916 68.416 1.00 19.39
ATOM 3067 N PHE A 391 24.950 27.195 71.406 1.00 17.01
ATOM 3068 CA PHE A 391 26.383 27.213 71.707 1.00 13.81
ATOM 3069 C PHE A 391 26.767 25.994 72.507 1.00 18.97
ATOM 3070 O PHE A 391 27.788 25.335 72.292 1.00 17.39
ATOM 3071 CB PHE A 391 26.716 28.464 72.505 1.00 16.57
ATOM 3072 CG PHE A 391 28.178 28.832 72.483 1.00 20.15
ATOM 3073 CD1 PHE A 391 28.900 28.717 71.295 1.00 23.44
ATOM 3074 CD2 PHE A 391 28.810 29.322 73.629 1.00 17.67
ATOM 3075 CE1 PHE A 391 30.242 29.081 71.247 1.00 25.42
ATOM 3076 CE2 PHE A 391 30.161 29.679 73.600 1.00 21.60
ATOM 3077 CZ PHE A 391 30.872 29.552 72.404 1.00 21.74
ATOM 3078 N TYR A 392 25.899 25.688 73.453 1.00 16.76
ATOM 3079 CA TYR A 392 26.093 24.528 74.314 1.00 14.53
ATOM 3080 C TYR A 392 26.030 23.258 73.477 1.00 20.85
ATOM 3081 O TYR A 392 26.888 22.387 73.570 1.00 21.28
ATOM 3082 CB TYR A 392 25.011 24.548 75.389 1.00 11.64
ATOM 3083 CG TYR A 392 24.758 23.236 76.085 1.00 15.88
ATOM 3084 CD1 TYR A 392 25.675 22.664 76.969 1.00 18.73
ATOM 3085 CD2 TYR A 392 23.536 22.598 75.901 1.00 17.10
ATOM 3086 CE1 TYR A 392 25.398 21.453 77.611 1.00 22.29
ATOM 3087 CE2 TYR A 392 23.239 21.389 76.536 1.00 17.34
ATOM 3088 CZ TYR A 392 24.173 20.821 77.390 1.00 21.65
ATOM 3089 OH TYR A 392 23.844 19.673 78.026 1.00 23.48
ATOM 3090 N LEU A 393 25.011 23.138 72.629 1.00 14.48
ATOM 3091 CA LEU A 393 24.964 21.930 71.820 1.00 16.19
ATOM 3092 C LEU A 393 26.240 21.775 70.996 1.00 21.33
ATOM 3093 O LEU A 393 26.776 20.671 70.857 1.00 21.58
ATOM 3094 CB LEU A 393 23.722 21.890 70.882 1.00 15.92
ATOM 3095 CG LEU A 393 22.420 21.613 71.632 1.00 16.78
ATOM 3096 CD1 LEU A 393 21.243 21.948 70.715 1.00 16.10
ATOM 3097 CD2 LEU A 393 22.368 20.168 72.101 1.00 15.41
ATOM 3098 N GLU A 394 26.692 22.903 70.431 1.00 17.94
ATOM 3099 CA GLU A 394 27.891 22.943 69.591 1.00 17.47
ATOM 3100 C GLU A 394 29.065 22.338 70.325 1.00 22.56
ATOM 3101 O GLU A 394 29.790 21.498 69.796 1.00 19.52
ATOM 3102 CB GLU A 394 28.238 24.372 69.180 1.00 17.77

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ATOM   3103  CG  GLU A 394      29.691  24.466  68.704  1.00 21.87
ATOM   3104  CD  GLU A 394      30.088  25.892  68.499  1.00 35.26
ATOM   3105  OE1 GLU A 394      29.443  26.672  67.835  1.00 37.15
ATOM   3106  OE2 GLU A 394      31.185  26.212  69.125  1.00 23.86
ATOM   3107  N   GLN A 395      29.226  22.758  71.574  1.00 20.49
ATOM   3108  CA  GLN A 395      30.303  22.250  72.400  1.00 20.42
ATOM   3109  C   GLN A 395      30.092  20.769  72.720  1.00 25.74
ATOM   3110  O   GLN A 395      31.016  19.972  72.734  1.00 29.45
ATOM   3111  CB  GLN A 395      30.474  23.105  73.709  1.00 20.72
ATOM   3112  CG  GLN A 395      31.074  24.483  73.365  1.00 15.91
ATOM   3113  CD  GLN A 395      31.156  25.473  74.518  1.00 23.39
ATOM   3114  OE1 GLN A 395      30.799  25.196  75.685  1.00 18.07
ATOM   3115  NE2 GLN A 395      31.625  26.663  74.177  1.00 21.74
ATOM   3116  N   LEU A 396      28.851  20.406  72.981  1.00 21.83
ATOM   3117  CA  LEU A 396      28.497  19.046  73.343  1.00 20.76
ATOM   3118  C   LEU A 396      28.638  18.071  72.176  1.00 23.05
ATOM   3119  O   LEU A 396      29.032  16.938  72.337  1.00 23.88
ATOM   3120  CB  LEU A 396      27.054  19.104  73.857  1.00 20.00
ATOM   3121  CG  LEU A 396      26.555  17.836  74.446  1.00 25.23
ATOM   3122  CD1 LEU A 396      27.296  17.572  75.738  1.00 28.56
ATOM   3123  CD2 LEU A 396      25.087  18.002  74.744  1.00 24.07
ATOM   3124  N   LEU A 397      28.328  18.524  70.994  1.00 18.54
ATOM   3125  CA  LEU A 397      28.351  17.694  69.808  1.00 19.54
ATOM   3126  C   LEU A 397      29.641  17.641  69.009  1.00 27.29
ATOM   3127  O   LEU A 397      29.710  16.985  67.968  1.00 28.65
ATOM   3128  CB  LEU A 397      27.143  18.043  68.891  1.00 17.91
ATOM   3129  CG  LEU A 397      25.798  17.909  69.619  1.00 20.05
ATOM   3130  CD1 LEU A 397      24.671  18.520  68.789  1.00 18.08
ATOM   3131  CD2 LEU A 397      25.520  16.443  69.920  1.00 21.42
ATOM   3132  N   GLY A 398      30.685  18.313  69.425  1.00 25.76
ATOM   3133  CA  GLY A 398      31.896  18.173  68.621  1.00 27.87
ATOM   3134  C   GLY A 398      32.558  19.413  68.060  1.00 29.85
ATOM   3135  O   GLY A 398      33.621  19.303  67.448  1.00 28.10
ATOM   3136  N   GLY A 399      31.964  20.593  68.243  1.00 24.15
ATOM   3137  CA  GLY A 399      32.594  21.787  67.719  1.00 21.84
ATOM   3138  C   GLY A 399      31.801  22.444  66.626  1.00 20.27
ATOM   3139  O   GLY A 399      30.877  21.901  66.046  1.00 22.03
ATOM   3140  N   PRO A 400      32.210  23.639  66.373  1.00 21.16
ATOM   3141  CA  PRO A 400      31.596  24.524  65.434  1.00 21.61
ATOM   3142  C   PRO A 400      31.451  23.932  64.094  1.00 28.95
ATOM   3143  O   PRO A 400      30.416  24.076  63.432  1.00 28.40
ATOM   3144  CB  PRO A 400      32.477  25.776  65.359  1.00 22.74
ATOM   3145  CG  PRO A 400      33.725  25.489  66.168  1.00 26.77
ATOM   3146  CD  PRO A 400      33.479  24.194  66.918  1.00 24.17
ATOM   3147  N   GLU A 401      32.529  23.284  63.694  1.00 28.08
ATOM   3148  CA  GLU A 401      32.553  22.660  62.394  1.00 28.25
ATOM   3149  C   GLU A 401      31.465  21.607  62.272  1.00 24.96
ATOM   3150  O   GLU A 401      30.708  21.576  61.308  1.00 21.56
ATOM   3151  CB  GLU A 401      33.924  22.040  62.187  1.00 31.41
ATOM   3152  CG  GLU A 401      34.588  22.470  60.879  1.00 50.84
ATOM   3153  CD  GLU A 401      35.376  21.328  60.314  1.00 94.96
ATOM   3154  OE1 GLU A 401      35.040  20.166  60.479  1.00100.00
ATOM   3155  OE2 GLU A 401      36.453  21.702  59.663  1.00100.00
ATOM   3156  N   ILE A 402      31.378  20.751  63.285  1.00 22.44
ATOM   3157  CA  ILE A 402      30.375  19.717  63.278  1.00 24.44
ATOM   3158  C   ILE A 402      28.987  20.324  63.312  1.00 29.62
ATOM   3159  O   ILE A 402      28.125  19.976  62.502  1.00 22.26
ATOM   3160  CB  ILE A 402      30.573  18.792  64.436  1.00 28.01
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ATOM 3161 CG1 ILE A 402 31.728 17.840 64.129 1.00 25.46
ATOM 3162 CG2 ILE A 402 29.257 18.044 64.720 1.00 31.45
ATOM 3163 CD1 ILE A 402 32.086 16.989 65.348 1.00 29.47
ATOM 3164 N PHE A 403 28.806 21.270 64.247 1.00 25.40
ATOM 3165 CA PHE A 403 27.539 21.974 64.418 1.00 23.64
ATOM 3166 C PHE A 403 27.131 22.827 63.207 1.00 24.67
ATOM 3167 O PHE A 403 25.940 22.935 62.860 1.00 23.76
ATOM 3168 CB PHE A 403 27.484 22.767 65.750 1.00 23.99
ATOM 3169 CG PHE A 403 26.066 22.896 66.252 1.00 23.55
ATOM 3170 CD1 PHE A 403 25.432 21.835 66.909 1.00 25.66
ATOM 3171 CD2 PHE A 403 25.369 24.089 66.045 1.00 23.45
ATOM 3172 CE1 PHE A 403 24.119 21.961 67.368 1.00 26.71
ATOM 3173 CE2 PHE A 403 24.065 24.245 66.507 1.00 24.58
ATOM 3174 CZ PHE A 403 23.454 23.174 67.161 1.00 24.36
ATOM 3175 N LEU A 404 28.103 23.454 62.565 1.00 18.37
ATOM 3176 CA LEU A 404 27.752 24.224 61.396 1.00 19.70
ATOM 3177 C LEU A 404 27.161 23.330 60.312 1.00 23.87
ATOM 3178 O LEU A 404 26.262 23.753 59.594 1.00 22.72
ATOM 3179 CB LEU A 404 28.867 25.117 60.847 1.00 20.74
ATOM 3180 CG LEU A 404 29.026 26.425 61.635 1.00 24.87
ATOM 3181 CD1 LEU A 404 30.384 27.056 61.345 1.00 26.17
ATOM 3182 CD2 LEU A 404 27.944 27.424 61.266 1.00 19.99
ATOM 3183 N GLY A 405 27.662 22.078 60.205 1.00 20.85
ATOM 3184 CA GLY A 405 27.173 21.098 59.225 1.00 16.93
ATOM 3185 C GLY A 405 25.687 20.844 59.464 1.00 20.17
ATOM 3186 O GLY A 405 24.872 20.712 58.556 1.00 19.11
ATOM 3187 N PHE A 406 25.346 20.814 60.739 1.00 18.34
ATOM 3188 CA PHE A 406 23.968 20.629 61.142 1.00 19.38
ATOM 3189 C PHE A 406 23.149 21.854 60.701 1.00 24.71
ATOM 3190 O PHE A 406 22.127 21.736 60.016 1.00 24.92
ATOM 3191 CB PHE A 406 23.811 20.239 62.626 1.00 17.08
ATOM 3192 CG PHE A 406 22.440 20.588 63.100 1.00 17.29
ATOM 3193 CD1 PHE A 406 21.348 19.779 62.795 1.00 18.79
ATOM 3194 CD2 PHE A 406 22.229 21.756 63.819 1.00 22.17
ATOM 3195 CE1 PHE A 406 20.066 20.089 63.242 1.00 21.72
ATOM 3196 CE2 PHE A 406 20.949 22.108 64.245 1.00 25.55
ATOM 3197 CZ PHE A 406 19.872 21.266 63.966 1.00 23.17
ATOM 3198 N LEU A 407 23.637 23.049 61.028 1.00 23.64
ATOM 3199 CA LEU A 407 22.944 24.287 60.642 1.00 24.87
ATOM 3200 C LEU A 407 22.597 24.312 59.161 1.00 22.41
ATOM 3201 O LEU A 407 21.479 24.620 58.769 1.00 20.72
ATOM 3202 CB LEU A 407 23.791 25.560 60.959 1.00 27.52
ATOM 3203 CG LEU A 407 23.074 26.747 61.652 1.00 34.83
ATOM 3204 CD1 LEU A 407 24.068 27.866 61.821 1.00 38.37
ATOM 3205 CD2 LEU A 407 21.906 27.303 60.863 1.00 36.77
ATOM 3206 N LYS A 408 23.587 24.048 58.315 1.00 22.80
ATOM 3207 CA LYS A 408 23.364 24.064 56.871 1.00 23.13
ATOM 3208 C LYS A 408 22.352 22.998 56.426 1.00 22.11
ATOM 3209 O LYS A 408 21.517 23.175 55.536 1.00 20.19
ATOM 3210 CB LYS A 408 24.650 23.961 56.082 1.00 25.07
ATOM 3211 CG LYS A 408 24.372 24.064 54.599 1.00 31.85
ATOM 3212 CD LYS A 408 25.620 24.004 53.740 1.00 30.52
ATOM 3213 CE LYS A 408 26.712 24.948 54.189 1.00 44.55
ATOM 3214 NZ LYS A 408 27.738 25.166 53.153 1.00 52.58
ATOM 3215 N ALA A 409 22.423 21.861 57.066 1.00 20.83
ATOM 3216 CA ALA A 409 21.481 20.812 56.728 1.00 23.36
ATOM 3217 C ALA A 409 20.047 21.215 57.138 1.00 25.95
ATOM 3218 O ALA A 409 19.062 20.940 56.447 1.00 23.39

SUBSTITUTE SHEET (RULE 26)

ATOM	3219	CB	ALA	A	409	21.892	19.518	57.422	1.00	24.61
ATOM	3220	N	TYR	A	410	19.971	21.870	58.295	1.00	18.99
ATOM	3221	CA	TYR	A	410	18.742	22.373	58.878	1.00	17.32
ATOM	3222	C	TYR	A	410	18.076	23.378	57.950	1.00	20.68
ATOM	3223	O	TYR	A	410	16.882	23.297	57.646	1.00	20.76
ATOM	3224	CB	TYR	A	410	19.046	23.007	60.248	1.00	18.05
ATOM	3225	CG	TYR	A	410	17.953	23.881	60.833	1.00	21.53
ATOM	3226	CD1	TYR	A	410	16.772	23.334	61.341	1.00	22.90
ATOM	3227	CD2	TYR	A	410	18.137	25.262	60.913	1.00	24.29
ATOM	3228	CE1	TYR	A	410	15.778	24.149	61.887	1.00	18.09
ATOM	3229	CE2	TYR	A	410	17.168	26.093	61.469	1.00	24.98
ATOM	3230	CZ	TYR	A	410	15.993	25.526	61.954	1.00	20.26
ATOM	3231	OH	TYR	A	410	15.056	26.328	62.527	1.00	21.69
ATOM	3232	N	VAL	A	411	18.869	24.318	57.491	1.00	15.71
ATOM	3233	CA	VAL	A	411	18.383	25.335	56.612	1.00	17.92
ATOM	3234	C	VAL	A	411	17.783	24.734	55.369	1.00	23.98
ATOM	3235	O	VAL	A	411	16.701	25.099	54.974	1.00	24.28
ATOM	3236	CB	VAL	A	411	19.511	26.312	56.254	1.00	23.58
ATOM	3237	CG1	VAL	A	411	19.094	27.279	55.139	1.00	22.54
ATOM	3238	CG2	VAL	A	411	19.940	27.085	57.505	1.00	24.67
ATOM	3239	N	GLU	A	412	18.543	23.824	54.750	1.00	25.06
ATOM	3240	CA	GLU	A	412	18.177	23.124	53.539	1.00	22.96
ATOM	3241	C	GLU	A	412	16.919	22.318	53.715	1.00	23.85
ATOM	3242	O	GLU	A	412	16.023	22.366	52.883	1.00	22.54
ATOM	3243	CB	GLU	A	412	19.302	22.173	53.210	1.00	26.35
ATOM	3244	CG	GLU	A	412	19.444	21.914	51.707	1.00	49.27
ATOM	3245	CD	GLU	A	412	20.800	21.342	51.380	1.00	100.00
ATOM	3246	OE1	GLU	A	412	21.851	21.791	51.838	1.00	100.00
ATOM	3247	OE2	GLU	A	412	20.727	20.308	50.566	1.00	100.00
ATOM	3248	N	LYS	A	413	16.854	21.581	54.824	1.00	17.32
ATOM	3249	CA	LYS	A	413	15.695	20.782	55.075	1.00	14.83
ATOM	3250	C	LYS	A	413	14.415	21.569	55.203	1.00	20.01
ATOM	3251	O	LYS	A	413	13.385	21.115	54.733	1.00	20.56
ATOM	3252	CB	LYS	A	413	15.874	19.925	56.283	1.00	15.20
ATOM	3253	CG	LYS	A	413	14.541	19.417	56.795	1.00	30.99
ATOM	3254	CD	LYS	A	413	14.126	18.085	56.202	1.00	36.92
ATOM	3255	CE	LYS	A	413	13.676	17.091	57.267	1.00	49.02
ATOM	3256	NZ	LYS	A	413	13.031	15.887	56.725	1.00	66.84
ATOM	3257	N	PHE	A	414	14.473	22.748	55.835	1.00	16.13
ATOM	3258	CA	PHE	A	414	13.293	23.542	56.088	1.00	13.37
ATOM	3259	C	PHE	A	414	13.145	24.807	55.296	1.00	20.62
ATOM	3260	O	PHE	A	414	12.255	25.621	55.547	1.00	19.74
ATOM	3261	CB	PHE	A	414	13.216	23.847	57.589	1.00	13.47
ATOM	3262	CG	PHE	A	414	13.090	22.586	58.414	1.00	17.03
ATOM	3263	CD1	PHE	A	414	11.957	21.779	58.315	1.00	22.40
ATOM	3264	CD2	PHE	A	414	14.097	22.157	59.273	1.00	18.74
ATOM	3265	CE1	PHE	A	414	11.790	20.610	59.057	1.00	20.15
ATOM	3266	CE2	PHE	A	414	13.945	20.984	60.017	1.00	21.81
ATOM	3267	CZ	PHE	A	414	12.789	20.206	59.935	1.00	19.96
ATOM	3268	N	SER	A	415	13.994	24.991	54.313	1.00	22.61
ATOM	3269	CA	SER	A	415	13.886	26.203	53.487	1.00	21.65
ATOM	3270	C	SER	A	415	12.483	26.344	52.912	1.00	22.89
ATOM	3271	O	SER	A	415	11.945	25.399	52.333	1.00	23.73
ATOM	3272	CB	SER	A	415	14.893	26.173	52.347	1.00	22.04
ATOM	3273	OG	SER	A	415	16.164	26.557	52.810	1.00	25.20
ATOM	3274	N	TYR	A	416	11.915	27.517	53.063	1.00	17.87
ATOM	3275	CA	TYR	A	416	10.583	27.849	52.552	1.00	21.68
ATOM	3276	C	TYR	A	416	9.454	27.291	53.372	1.00	22.08

ATOM 3277 O TYR A 416 8.306 27.333 52.923 1.00 20.11
ATOM 3278 CB TYR A 416 10.325 27.563 51.033 1.00 24.28
ATOM 3279 CG TYR A 416 11.505 27.894 50.178 1.00 24.78
ATOM 3280 CD1 TYR A 416 12.358 26.878 49.745 1.00 24.62
ATOM 3281 CD2 TYR A 416 11.790 29.217 49.839 1.00 24.25
ATOM 3282 CE1 TYR A 416 13.483 27.163 48.979 1.00 19.21
ATOM 3283 CE2 TYR A 416 12.906 29.515 49.059 1.00 25.80
ATOM 3284 CZ TYR A 416 13.749 28.484 48.635 1.00 28.59
ATOM 3285 OH TYR A 416 14.859 28.745 47.870 1.00 32.88
ATOM 3286 N LYS A 417 9.799 26.749 54.541 1.00 15.88
ATOM 3287 CA LYS A 417 8.806 26.181 55.428 1.00 14.99
ATOM 3288 C LYS A 417 8.702 27.001 56.708 1.00 19.80
ATOM 3289 O LYS A 417 9.552 27.832 56.976 1.00 17.04
ATOM 3290 CB LYS A 417 9.182 24.754 55.774 1.00 17.07
ATOM 3291 CG LYS A 417 8.902 23.837 54.568 1.00 42.14
ATOM 3292 CD LYS A 417 9.705 22.537 54.512 1.00 70.23
ATOM 3293 CE LYS A 417 9.893 22.020 53.080 1.00 98.46
ATOM 3294 NZ LYS A 417 11.308 21.895 52.655 1.00100.00
ATOM 3295 N SER A 418 7.656 26.770 57.483 1.00 18.76
ATOM 3296 CA SER A 418 7.453 27.431 58.777 1.00 18.23
ATOM 3297 C SER A 418 7.414 26.261 59.746 1.00 19.84
ATOM 3298 O SER A 418 6.668 25.314 59.510 1.00 21.54
ATOM 3299 CB SER A 418 6.204 28.273 58.786 1.00 19.06
ATOM 3300 OG SER A 418 6.323 29.170 57.698 1.00 21.69
ATOM 3301 N ILE A 419 8.262 26.253 60.778 1.00 15.55
ATOM 3302 CA ILE A 419 8.365 25.081 61.648 1.00 15.71
ATOM 3303 C ILE A 419 8.280 25.384 63.110 1.00 19.68
ATOM 3304 O ILE A 419 8.328 26.531 63.526 1.00 17.46
ATOM 3305 CB ILE A 419 9.747 24.424 61.410 1.00 18.62
ATOM 3306 CG1 ILE A 419 10.831 25.461 61.722 1.00 19.15
ATOM 3307 CG2 ILE A 419 9.918 24.029 59.951 1.00 17.84
ATOM 3308 CD1 ILE A 419 12.228 24.868 61.646 1.00 20.96
ATOM 3309 N THR A 420 8.174 24.318 63.898 1.00 16.98
ATOM 3310 CA THR A 420 8.093 24.498 65.337 1.00 16.43
ATOM 3311 C THR A 420 9.348 23.960 65.974 1.00 21.83
ATOM 3312 O THR A 420 10.141 23.312 65.300 1.00 18.82
ATOM 3313 CB THR A 420 6.937 23.675 65.943 1.00 20.81
ATOM 3314 OG1 THR A 420 7.279 22.307 65.888 1.00 17.35
ATOM 3315 CG2 THR A 420 5.652 23.905 65.170 1.00 17.66
ATOM 3316 N THR A 421 9.509 24.230 67.279 1.00 15.44
ATOM 3317 CA THR A 421 10.627 23.719 68.062 1.00 14.71
ATOM 3318 C THR A 421 10.714 22.185 67.921 1.00 19.15
ATOM 3319 O THR A 421 11.801 21.642 67.832 1.00 18.94
ATOM 3320 CB THR A 421 10.389 24.091 69.534 1.00 18.57
ATOM 3321 OG1 THR A 421 10.496 25.501 69.612 1.00 16.52
ATOM 3322 CG2 THR A 421 11.377 23.368 70.456 1.00 15.83
ATOM 3323 N ASP A 422 9.580 21.463 67.890 1.00 15.92
ATOM 3324 CA ASP A 422 9.659 19.986 67.722 1.00 14.54
ATOM 3325 C ASP A 422 10.272 19.580 66.359 1.00 21.58
ATOM 3326 O ASP A 422 11.048 18.588 66.225 1.00 20.31
ATOM 3327 CB ASP A 422 8.314 19.238 67.909 1.00 14.53
ATOM 3328 CG ASP A 422 8.560 17.737 67.831 1.00 19.43
ATOM 3329 OD1 ASP A 422 9.323 17.129 68.596 1.00 16.06
ATOM 3330 OD2 ASP A 422 7.911 17.117 66.852 1.00 21.53
ATOM 3331 N ASP A 423 9.918 20.353 65.322 1.00 19.09
ATOM 3332 CA ASP A 423 10.495 20.082 63.995 1.00 17.88
ATOM 3333 C ASP A 423 12.013 20.170 64.096 1.00 19.57
ATOM 3334 O ASP A 423 12.765 19.301 63.637 1.00 19.33

ATOM 3335 CB ASP A 423 9.958 21.045 62.912 1.00 17.74
ATOM 3336 CG ASP A 423 8.504 20.825 62.618 1.00 23.90
ATOM 3337 OD1 ASP A 423 8.010 19.730 62.614 1.00 31.78
ATOM 3338 OD2 ASP A 423 7.820 21.911 62.423 1.00 23.23
ATOM 3339 N TRP A 424 12.459 21.248 64.730 1.00 15.04
ATOM 3340 CA TRP A 424 13.889 21.495 64.920 1.00 15.04
ATOM 3341 C TRP A 424 14.584 20.406 65.724 1.00 20.40
ATOM 3342 O TRP A 424 15.596 19.843 65.336 1.00 17.34
ATOM 3343 CB TRP A 424 14.071 22.831 65.642 1.00 15.30
ATOM 3344 CG TRP A 424 15.484 23.055 66.071 1.00 16.43
ATOM 3345 CD1 TRP A 424 16.492 23.579 65.329 1.00 18.57
ATOM 3346 CD2 TRP A 424 16.018 22.769 67.349 1.00 15.38
ATOM 3347 NE1 TRP A 424 17.628 23.617 66.064 1.00 16.29
ATOM 3348 CE2 TRP A 424 17.370 23.117 67.308 1.00 16.11
ATOM 3349 CE3 TRP A 424 15.469 22.258 68.508 1.00 16.08
ATOM 3350 CZ2 TRP A 424 18.190 22.968 68.407 1.00 15.49
ATOM 3351 CZ3 TRP A 424 16.279 22.113 69.613 1.00 17.94
ATOM 3352 CH2 TRP A 424 17.627 22.474 69.563 1.00 18.84
ATOM 3353 N LYS A 425 14.020 20.075 66.877 1.00 16.42
ATOM 3354 CA LYS A 425 14.614 19.058 67.725 1.00 16.03
ATOM 3355 C LYS A 425 14.518 17.671 67.082 1.00 19.39
ATOM 3356 O LYS A 425 15.424 16.840 67.224 1.00 15.23
ATOM 3357 CB LYS A 425 13.933 19.094 69.083 1.00 19.23
ATOM 3358 CG LYS A 425 14.671 18.368 70.197 1.00 20.25
ATOM 3359 CD LYS A 425 13.968 18.523 71.536 1.00 18.98
ATOM 3360 CE LYS A 425 13.745 17.195 72.227 1.00 26.47
ATOM 3361 NZ LYS A 425 12.642 16.425 71.626 1.00 29.32
ATOM 3362 N ASP A 426 13.393 17.399 66.391 1.00 14.97
ATOM 3363 CA ASP A 426 13.265 16.085 65.778 1.00 16.78
ATOM 3364 C ASP A 426 14.386 15.932 64.720 1.00 24.04
ATOM 3365 O ASP A 426 15.006 14.882 64.587 1.00 24.93
ATOM 3366 CB ASP A 426 11.825 15.858 65.192 1.00 16.86
ATOM 3367 CG ASP A 426 10.763 15.617 66.260 1.00 20.58
ATOM 3368 OD1 ASP A 426 10.993 15.457 67.440 1.00 19.54
ATOM 3369 OD2 ASP A 426 9.527 15.680 65.838 1.00 16.03
ATOM 3370 N PHE A 427 14.649 17.012 63.971 1.00 17.98
ATOM 3371 CA PHE A 427 15.683 16.995 62.927 1.00 18.47
ATOM 3372 C PHE A 427 17.098 16.855 63.516 1.00 21.82
ATOM 3373 O PHE A 427 17.966 16.117 63.064 1.00 20.65
ATOM 3374 CB PHE A 427 15.567 18.226 62.012 1.00 17.69
ATOM 3375 CG PHE A 427 16.598 18.171 60.945 1.00 18.08
ATOM 3376 CD1 PHE A 427 16.536 17.192 59.953 1.00 22.20
ATOM 3377 CD2 PHE A 427 17.673 19.058 60.951 1.00 20.78
ATOM 3378 CE1 PHE A 427 17.514 17.125 58.957 1.00 22.24
ATOM 3379 CE2 PHE A 427 18.659 19.007 59.965 1.00 23.56
ATOM 3380 CZ PHE A 427 18.575 18.032 58.967 1.00 20.58
ATOM 3381 N LEU A 428 17.323 17.575 64.567 1.00 16.49
ATOM 3382 CA LEU A 428 18.582 17.512 65.258 1.00 17.57
ATOM 3383 C LEU A 428 18.888 16.044 65.591 1.00 21.61
ATOM 3384 O LEU A 428 19.995 15.562 65.387 1.00 22.21
ATOM 3385 CB LEU A 428 18.467 18.372 66.573 1.00 18.03
ATOM 3386 CG LEU A 428 19.727 18.463 67.424 1.00 22.98
ATOM 3387 CD1 LEU A 428 20.718 19.469 66.840 1.00 23.48
ATOM 3388 CD2 LEU A 428 19.347 18.859 68.843 1.00 19.42
ATOM 3389 N TYR A 429 17.888 15.317 66.124 1.00 17.99
ATOM 3390 CA TYR A 429 18.108 13.928 66.468 1.00 17.92
ATOM 3391 C TYR A 429 18.317 13.083 65.234 1.00 20.04
ATOM 3392 O TYR A 429 19.028 12.089 65.222 1.00 21.75

ATOM	3393	CB	TYR	A	429	16.930	13.365	67.228	1.00	16.70
ATOM	3394	CG	TYR	A	429	17.129	13.527	68.694	1.00	19.75
ATOM	3395	CD1	TYR	A	429	16.871	14.745	69.339	1.00	22.56
ATOM	3396	CD2	TYR	A	429	17.551	12.436	69.450	1.00	19.39
ATOM	3397	CE1	TYR	A	429	17.013	14.880	70.723	1.00	20.62
ATOM	3398	CE2	TYR	A	429	17.719	12.555	70.827	1.00	19.33
ATOM	3399	CZ	TYR	A	429	17.447	13.772	71.460	1.00	28.34
ATOM	3400	OH	TYR	A	429	17.605	13.861	72.827	1.00	21.99
ATOM	3401	N	SER	A	430	17.680	13.480	64.186	1.00	21.12
ATOM	3402	CA	SER	A	430	17.814	12.754	62.966	1.00	22.17
ATOM	3403	C	SER	A	430	19.202	12.960	62.417	1.00	27.73
ATOM	3404	O	SER	A	430	19.905	12.020	62.037	1.00	29.03
ATOM	3405	CB	SER	A	430	16.798	13.249	61.972	1.00	25.53
ATOM	3406	OG	SER	A	430	16.768	12.307	60.941	1.00	38.11
ATOM	3407	N	TYR	A	431	19.606	14.213	62.366	1.00	20.64
ATOM	3408	CA	TYR	A	431	20.940	14.525	61.861	1.00	18.79
ATOM	3409	C	TYR	A	431	22.067	13.832	62.650	1.00	28.08
ATOM	3410	O	TYR	A	431	22.985	13.217	62.090	1.00	27.29
ATOM	3411	CB	TYR	A	431	21.155	16.047	61.853	1.00	18.96
ATOM	3412	CG	TYR	A	431	22.451	16.469	61.216	1.00	21.07
ATOM	3413	CD1	TYR	A	431	22.515	16.652	59.834	1.00	22.11
ATOM	3414	CD2	TYR	A	431	23.591	16.703	61.991	1.00	21.91
ATOM	3415	CE1	TYR	A	431	23.710	17.020	59.217	1.00	21.48
ATOM	3416	CE2	TYR	A	431	24.794	17.077	61.391	1.00	20.59
ATOM	3417	CZ	TYR	A	431	24.845	17.237	60.002	1.00	26.37
ATOM	3418	OH	TYR	A	431	26.023	17.606	59.384	1.00	25.96
ATOM	3419	N	PHE	A	432	22.000	13.968	63.976	1.00	20.75
ATOM	3420	CA	PHE	A	432	22.978	13.412	64.899	1.00	21.17
ATOM	3421	C	PHE	A	432	22.574	12.027	65.391	1.00	29.42
ATOM	3422	O	PHE	A	432	22.628	11.709	66.609	1.00	27.60
ATOM	3423	CB	PHE	A	432	23.221	14.370	66.082	1.00	21.99
ATOM	3424	CG	PHE	A	432	23.937	15.632	65.661	1.00	22.27
ATOM	3425	CD1	PHE	A	432	25.310	15.611	65.413	1.00	23.51
ATOM	3426	CD2	PHE	A	432	23.267	16.844	65.511	1.00	25.91
ATOM	3427	CE1	PHE	A	432	26.017	16.751	65.038	1.00	23.71
ATOM	3428	CE2	PHE	A	432	23.964	17.997	65.137	1.00	28.53
ATOM	3429	CZ	PHE	A	432	25.337	17.958	64.903	1.00	24.21
ATOM	3430	N	LYS	A	433	22.176	11.202	64.418	1.00	29.48
ATOM	3431	CA	LYS	A	433	21.750	9.871	64.741	1.00	31.50
ATOM	3432	C	LYS	A	433	22.772	9.105	65.542	1.00	38.53
ATOM	3433	O	LYS	A	433	22.434	8.352	66.461	1.00	40.17
ATOM	3434	CB	LYS	A	433	21.217	9.082	63.568	1.00	33.47
ATOM	3435	CG	LYS	A	433	22.089	9.099	62.332	1.00	49.54
ATOM	3436	CD	LYS	A	433	21.366	8.440	61.155	1.00	84.50
ATOM	3437	CE	LYS	A	433	22.280	7.745	60.138	1.00	100.00
ATOM	3438	NZ	LYS	A	433	23.098	6.630	60.676	1.00	100.00
ATOM	3439	N	ASP	A	434	24.026	9.336	65.208	1.00	35.45
ATOM	3440	CA	ASP	A	434	25.124	8.653	65.881	1.00	37.23
ATOM	3441	C	ASP	A	434	25.525	9.192	67.245	1.00	38.69
ATOM	3442	O	ASP	A	434	26.416	8.654	67.902	1.00	39.17
ATOM	3443	CB	ASP	A	434	26.314	8.470	64.928	1.00	41.50
ATOM	3444	CG	ASP	A	434	25.890	7.728	63.692	1.00	67.13
ATOM	3445	OD1	ASP	A	434	25.175	6.717	63.728	1.00	67.36
ATOM	3446	OD2	ASP	A	434	26.315	8.303	62.586	1.00	84.58
ATOM	3447	N	LYS	A	435	24.853	10.245	67.689	1.00	32.08
ATOM	3448	CA	LYS	A	435	25.162	10.821	68.969	1.00	29.32
ATOM	3449	C	LYS	A	435	23.929	10.964	69.810	1.00	29.59
ATOM	3450	O	LYS	A	435	23.900	11.671	70.787	1.00	32.10

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ATOM	3451	CB	LYS	A	435	25.898	12.127	68.804	1.00	33.40
ATOM	3452	CG	LYS	A	435	27.071	12.016	67.829	1.00	32.88
ATOM	3453	CD	LYS	A	435	27.667	13.366	67.474	1.00	38.14
ATOM	3454	CE	LYS	A	435	29.124	13.505	67.880	1.00	48.06
ATOM	3455	NZ	LYS	A	435	29.892	14.457	67.044	1.00	38.96
ATOM	3456	N	VAL	A	436	22.890	10.278	69.418	1.00	26.88
ATOM	3457	CA	VAL	A	436	21.645	10.309	70.163	1.00	29.00
ATOM	3458	C	VAL	A	436	21.929	10.232	71.659	1.00	34.17
ATOM	3459	O	VAL	A	436	21.263	10.835	72.511	1.00	32.94
ATOM	3460	CB	VAL	A	436	20.773	9.138	69.695	1.00	35.31
ATOM	3461	CG1	VAL	A	436	19.623	8.885	70.644	1.00	34.86
ATOM	3462	CG2	VAL	A	436	20.210	9.448	68.314	1.00	35.95
ATOM	3463	N	ASP	A	437	22.955	9.464	71.974	1.00	33.59
ATOM	3464	CA	ASP	A	437	23.360	9.292	73.340	1.00	37.03
ATOM	3465	C	ASP	A	437	23.794	10.594	73.986	1.00	39.40
ATOM	3466	O	ASP	A	437	23.501	10.851	75.162	1.00	39.71
ATOM	3467	CB	ASP	A	437	24.406	8.189	73.488	1.00	40.58
ATOM	3468	CG	ASP	A	437	23.712	6.868	73.551	1.00	70.66
ATOM	3469	OD1	ASP	A	437	22.493	6.763	73.671	1.00	70.63
ATOM	3470	OD2	ASP	A	437	24.546	5.856	73.445	1.00	91.48
ATOM	3471	N	VAL	A	438	24.495	11.400	73.200	1.00	33.72
ATOM	3472	CA	VAL	A	438	24.945	12.698	73.657	1.00	34.65
ATOM	3473	C	VAL	A	438	23.735	13.621	73.735	1.00	33.57
ATOM	3474	O	VAL	A	438	23.536	14.325	74.704	1.00	34.91
ATOM	3475	CB	VAL	A	438	26.034	13.287	72.758	1.00	37.55
ATOM	3476	CG1	VAL	A	438	26.503	14.626	73.299	1.00	34.71
ATOM	3477	CG2	VAL	A	438	27.208	12.318	72.709	1.00	38.05
ATOM	3478	N	LEU	A	439	22.903	13.588	72.712	1.00	24.40
ATOM	3479	CA	LEU	A	439	21.721	14.414	72.719	1.00	22.32
ATOM	3480	C	LEU	A	439	20.834	14.099	73.924	1.00	26.48
ATOM	3481	O	LEU	A	439	20.191	14.942	74.529	1.00	22.38
ATOM	3482	CB	LEU	A	439	20.933	14.276	71.421	1.00	20.57
ATOM	3483	CG	LEU	A	439	21.576	14.997	70.230	1.00	23.44
ATOM	3484	CD1	LEU	A	439	20.906	14.546	68.949	1.00	21.22
ATOM	3485	CD2	LEU	A	439	21.448	16.504	70.377	1.00	26.40
ATOM	3486	N	ASN	A	440	20.812	12.857	74.328	1.00	28.97
ATOM	3487	CA	ASN	A	440	19.989	12.526	75.468	1.00	30.65
ATOM	3488	C	ASN	A	440	20.485	13.059	76.815	1.00	36.08
ATOM	3489	O	ASN	A	440	19.797	12.963	77.840	1.00	35.25
ATOM	3490	CB	ASN	A	440	19.572	11.051	75.500	1.00	32.98
ATOM	3491	CG	ASN	A	440	18.715	10.673	74.297	1.00	44.08
ATOM	3492	OD1	ASN	A	440	18.880	9.598	73.713	1.00	45.17
ATOM	3493	ND2	ASN	A	440	17.787	11.540	73.932	1.00	28.22
ATOM	3494	N	GLN	A	441	21.671	13.638	76.817	1.00	31.53
ATOM	3495	CA	GLN	A	441	22.229	14.187	78.039	1.00	31.77
ATOM	3496	C	GLN	A	441	21.697	15.567	78.287	1.00	29.73
ATOM	3497	O	GLN	A	441	21.898	16.161	79.338	1.00	29.53
ATOM	3498	CB	GLN	A	441	23.761	14.354	77.925	1.00	34.83
ATOM	3499	CG	GLN	A	441	24.547	13.034	77.744	1.00	58.52
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ATOM	3502	NE2	GLN	A	441	26.520	12.176	76.643	1.00	77.72
ATOM	3503	N	VAL	A	442	21.060	16.102	77.281	1.00	24.12
ATOM	3504	CA	VAL	A	442	20.559	17.455	77.403	1.00	21.42
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ATOM	3507	CB	VAL	A	442	20.290	18.001	76.008	1.00	24.29
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ATOM 3515 CG ASP A 443 17.107 19.409 82.156 1.00 22.28
ATOM 3516 OD1 ASP A 443 15.962 19.193 81.821 1.00 25.25
ATOM 3517 OD2 ASP A 443 17.469 19.832 83.350 1.00 29.16
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ATOM 3558 CH2 TRP A 447 21.734 26.539 77.508 1.00 17.94
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ATOM	3567	N	TYR	A	449	11.365	24.630	78.287	1.00 14.33
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ATOM	3569	C	TYR	A	449	10.411	25.677	80.383	1.00 24.16
ATOM	3570	O	TYR	A	449	9.453	26.169	80.973	1.00 31.60
ATOM	3571	CB	TYR	A	449	9.242	23.846	79.133	1.00 14.78
ATOM	3572	CG	TYR	A	449	9.181	23.150	77.809	1.00 18.85
ATOM	3573	CD1	TYR	A	449	8.803	23.864	76.673	1.00 22.43
ATOM	3574	CD2	TYR	A	449	9.544	21.811	77.678	1.00 21.55
ATOM	3575	CE1	TYR	A	449	8.780	23.284	75.406	1.00 23.44
ATOM	3576	CE2	TYR	A	449	9.524	21.204	76.421	1.00 24.76
ATOM	3577	CZ	TYR	A	449	9.139	21.940	75.297	1.00 30.93
ATOM	3578	OH	TYR	A	449	9.104	21.340	74.074	1.00 32.94
ATOM	3579	N	SER	A	450	11.632	25.666	80.922	1.00 20.74
ATOM	3580	CA	SER	A	450	11.805	26.273	82.232	1.00 19.22
ATOM	3581	C	SER	A	450	12.173	27.745	82.136	1.00 19.24
ATOM	3582	O	SER	A	450	12.873	28.169	81.232	1.00 16.93
ATOM	3583	CB	SER	A	450	12.788	25.513	83.115	1.00 18.75
ATOM	3584	OG	SER	A	450	12.355	24.182	83.271	1.00 19.76
ATOM	3585	N	PRO	A	451	11.708	28.532	83.090	1.00 18.00
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ATOM	3587	C	PRO	A	451	13.417	30.093	83.732	1.00 19.79
ATOM	3588	O	PRO	A	451	13.984	29.124	84.228	1.00 19.56
ATOM	3589	CB	PRO	A	451	11.037	30.565	84.057	1.00 15.55
ATOM	3590	CG	PRO	A	451	10.705	29.459	85.055	1.00 21.58
ATOM	3591	CD	PRO	A	451	11.020	28.141	84.342	1.00 21.20
ATOM	3592	N	GLY	A	452	13.928	31.341	83.724	1.00 17.89
ATOM	3593	CA	GLY	A	452	15.202	31.665	84.338	1.00 18.57
ATOM	3594	C	GLY	A	452	16.407	31.317	83.478	1.00 21.97
ATOM	3595	O	GLY	A	452	16.290	31.071	82.276	1.00 21.83
ATOM	3596	N	LEU	A	453	17.589	31.317	84.107	1.00 19.93
ATOM	3597	CA	LEU	A	453	18.837	30.982	83.415	1.00 18.02
ATOM	3598	C	LEU	A	453	18.793	29.544	82.986	1.00 16.18
ATOM	3599	O	LEU	A	453	18.144	28.738	83.626	1.00 17.78
ATOM	3600	CB	LEU	A	453	20.094	31.244	84.292	1.00 17.95
ATOM	3601	CG	LEU	A	453	20.310	32.752	84.572	1.00 23.56
ATOM	3602	CD1	LEU	A	453	21.420	32.994	85.574	1.00 22.35
ATOM	3603	CD2	LEU	A	453	20.625	33.534	83.300	1.00 30.45
ATOM	3604	N	PRO	A	454	19.484	29.235	81.905	1.00 13.25
ATOM	3605	CA	PRO	A	454	19.535	27.899	81.411	1.00 15.46
ATOM	3606	C	PRO	A	454	20.119	27.024	82.485	1.00 23.30
ATOM	3607	O	PRO	A	454	20.815	27.513	83.353	1.00 23.78
ATOM	3608	CB	PRO	A	454	20.495	27.948	80.237	1.00 17.39
ATOM	3609	CG	PRO	A	454	20.556	29.378	79.823	1.00 18.14
ATOM	3610	CD	PRO	A	454	20.075	30.206	80.977	1.00 13.32
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ATOM	3614	O	PRO	A	455	22.296	23.986	84.337	1.00 27.35
ATOM	3615	CB	PRO	A	455	19.652	23.427	82.900	1.00 22.39
ATOM	3616	CG	PRO	A	455	19.374	23.599	81.408	1.00 26.96
ATOM	3617	CD	PRO	A	455	19.350	25.092	81.148	1.00 22.06
ATOM	3618	N	ILE	A	456	22.447	24.964	82.326	1.00 23.73
ATOM	3619	CA	ILE	A	456	23.899	24.830	82.174	1.00 23.23
ATOM	3620	C	ILE	A	456	24.529	25.986	81.356	1.00 27.18
ATOM	3621	O	ILE	A	456	23.978	26.449	80.360	1.00 24.63
ATOM	3622	CB	ILE	A	456	24.307	23.478	81.556	1.00 25.34
ATOM	3623	CG1	ILE	A	456	25.823	23.393	81.561	1.00 27.12
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ATOM 3659 CE2 TYR A 460 29.404 32.232 76.198 1.00 14.35
ATOM 3660 CZ TYR A 460 28.690 31.628 77.231 1.00 21.89
ATOM 3661 OH TYR A 460 27.326 31.523 77.162 1.00 16.31
ATOM 3662 N ASP A 461 35.842 31.343 76.046 1.00 19.66
ATOM 3663 CA ASP A 461 37.212 31.809 76.095 1.00 18.27
ATOM 3664 C ASP A 461 37.169 33.141 76.798 1.00 18.19
ATOM 3665 O ASP A 461 36.188 33.860 76.643 1.00 18.93
ATOM 3666 CB ASP A 461 37.798 31.934 74.697 1.00 23.01
ATOM 3667 CG ASP A 461 39.212 32.406 74.742 1.00 31.63
ATOM 3668 OD1 ASP A 461 40.164 31.685 74.960 1.00 40.43
ATOM 3669 OD2 ASP A 461 39.294 33.681 74.538 1.00 22.42
ATOM 3670 N MET A 462 38.198 33.454 77.576 1.00 15.84
ATOM 3671 CA MET A 462 38.210 34.688 78.349 1.00 15.66
ATOM 3672 C MET A 462 39.165 35.777 77.882 1.00 17.32
ATOM 3673 O MET A 462 39.239 36.842 78.495 1.00 15.93
ATOM 3674 CB MET A 462 38.536 34.363 79.806 1.00 16.36
ATOM 3675 CG MET A 462 37.478 33.480 80.420 1.00 21.50
ATOM 3676 SD MET A 462 35.876 34.326 80.563 1.00 24.64
ATOM 3677 CE MET A 462 36.280 35.573 81.816 1.00 20.50
ATOM 3678 N THR A 463 39.914 35.489 76.836 1.00 17.14
ATOM 3679 CA THR A 463 40.904 36.405 76.288 1.00 16.87
ATOM 3680 C THR A 463 40.541 37.879 76.325 1.00 23.58
ATOM 3681 O THR A 463 41.232 38.658 76.992 1.00 25.77
ATOM 3682 CB THR A 463 41.430 35.983 74.904 1.00 24.32

ATOM	3683	OG1	THR	A	463	41.785	34.618	74.927	1.00	20.48
ATOM	3684	CG2	THR	A	463	42.653	36.821	74.545	1.00	19.13
ATOM	3685	N	LEU	A	464	39.500	38.305	75.582	1.00	17.78
ATOM	3686	CA	LEU	A	464	39.123	39.732	75.548	1.00	19.02
ATOM	3687	C	LEU	A	464	38.314	40.259	76.751	1.00	18.77
ATOM	3688	O	LEU	A	464	38.250	41.450	77.001	1.00	21.30
ATOM	3689	CB	LEU	A	464	38.360	40.033	74.245	1.00	20.69
ATOM	3690	CG	LEU	A	464	39.213	39.688	73.006	1.00	27.61
ATOM	3691	CD1	LEU	A	464	38.360	39.792	71.728	1.00	29.60
ATOM	3692	CD2	LEU	A	464	40.427	40.619	72.898	1.00	21.71
ATOM	3693	N	THR	A	465	37.674	39.353	77.479	1.00	15.92
ATOM	3694	CA	THR	A	465	36.843	39.694	78.609	1.00	14.62
ATOM	3695	C	THR	A	465	37.619	40.024	79.854	1.00	17.84
ATOM	3696	O	THR	A	465	37.211	40.865	80.646	1.00	16.88
ATOM	3697	CB	THR	A	465	35.871	38.550	78.901	1.00	21.80
ATOM	3698	OG1	THR	A	465	35.073	38.342	77.759	1.00	18.69
ATOM	3699	CG2	THR	A	465	34.956	38.944	80.041	1.00	25.42
ATOM	3700	N	ASN	A	466	38.721	39.324	80.043	1.00	16.40
ATOM	3701	CA	ASN	A	466	39.540	39.527	81.213	1.00	16.14
ATOM	3702	C	ASN	A	466	39.836	40.996	81.525	1.00	19.38
ATOM	3703	O	ASN	A	466	39.734	41.439	82.663	1.00	19.58
ATOM	3704	CB	ASN	A	466	40.849	38.731	81.111	1.00	14.60
ATOM	3705	CG	ASN	A	466	40.657	37.270	81.423	1.00	26.76
ATOM	3706	OD1	ASN	A	466	41.408	36.403	80.963	1.00	25.03
ATOM	3707	ND2	ASN	A	466	39.660	36.987	82.248	1.00	19.27
ATOM	3708	N	ALA	A	467	40.235	41.789	80.553	1.00	15.87
ATOM	3709	CA	ALA	A	467	40.531	43.172	80.894	1.00	13.57
ATOM	3710	C	ALA	A	467	39.287	43.952	81.326	1.00	20.84
ATOM	3711	O	ALA	A	467	39.354	44.894	82.135	1.00	20.42
ATOM	3712	CB	ALA	A	467	41.227	43.871	79.761	1.00	13.94
ATOM	3713	N	CYS	A	468	38.120	43.554	80.791	1.00	19.04
ATOM	3714	CA	CYS	A	468	36.901	44.243	81.149	1.00	17.27
ATOM	3715	C	CYS	A	468	36.537	43.974	82.585	1.00	17.05
ATOM	3716	O	CYS	A	468	36.056	44.844	83.325	1.00	17.72
ATOM	3717	CB	CYS	A	468	35.774	43.798	80.232	1.00	17.11
ATOM	3718	SG	CYS	A	468	36.190	44.017	78.497	1.00	20.64
ATOM	3719	N	ILE	A	469	36.760	42.727	82.956	1.00	14.28
ATOM	3720	CA	ILE	A	469	36.466	42.270	84.287	1.00	13.17
ATOM	3721	C	ILE	A	469	37.332	42.942	85.315	1.00	17.17
ATOM	3722	O	ILE	A	469	36.873	43.371	86.379	1.00	16.23
ATOM	3723	CB	ILE	A	469	36.609	40.788	84.347	1.00	16.75
ATOM	3724	CG1	ILE	A	469	35.407	40.190	83.624	1.00	19.41
ATOM	3725	CG2	ILE	A	469	36.602	40.402	85.802	1.00	18.44
ATOM	3726	CD1	ILE	A	469	35.497	38.673	83.482	1.00	37.72
ATOM	3727	N	ALA	A	470	38.602	43.030	84.986	1.00	15.95
ATOM	3728	CA	ALA	A	470	39.554	43.656	85.860	1.00	14.77
ATOM	3729	C	ALA	A	470	39.163	45.097	86.132	1.00	16.16
ATOM	3730	O	ALA	A	470	39.143	45.580	87.293	1.00	15.72
ATOM	3731	CB	ALA	A	470	40.934	43.613	85.238	1.00	16.18
ATOM	3732	N	LEU	A	471	38.868	45.811	85.041	1.00	16.58
ATOM	3733	CA	LEU	A	471	38.508	47.215	85.175	1.00	13.63
ATOM	3734	C	LEU	A	471	37.179	47.407	85.893	1.00	18.69
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ATOM	3736	CB	LEU	A	471	38.599	47.968	83.850	1.00	12.93
ATOM	3737	CG	LEU	A	471	38.562	49.488	84.041	1.00	21.88
ATOM	3738	CD1	LEU	A	471	39.706	49.988	84.941	1.00	20.14
ATOM	3739	CD2	LEU	A	471	38.652	50.148	82.647	1.00	24.79
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ATOM 3741 CA SER A 472 34.893 46.789 86.172 1.00 16.97
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ATOM 3743 O SER A 472 34.406 47.153 88.555 1.00 19.09
ATOM 3744 CB SER A 472 33.774 45.995 85.503 1.00 17.40
ATOM 3745 OG SER A 472 34.008 44.617 85.597 1.00 23.16
ATOM 3746 N GLN A 473 35.717 45.423 87.996 1.00 12.19
ATOM 3747 CA GLN A 473 35.819 45.089 89.379 1.00 12.48
ATOM 3748 C GLN A 473 36.518 46.171 90.135 1.00 15.41
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ATOM 3755 N ARG A 474 37.526 46.773 89.500 1.00 15.24
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ATOM 3757 C ARG A 474 37.329 49.021 90.504 1.00 20.39
ATOM 3758 O ARG A 474 37.435 49.652 91.553 1.00 17.27
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ATOM 3766 N TRP A 475 36.431 49.339 89.585 1.00 13.75
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ATOM 3770 CB TRP A 475 34.902 50.918 88.643 1.00 14.34
ATOM 3771 CG TRP A 475 35.781 51.876 87.925 1.00 16.86
ATOM 3772 CD1 TRP A 475 36.579 51.601 86.855 1.00 19.96
ATOM 3773 CD2 TRP A 475 35.932 53.280 88.198 1.00 16.47
ATOM 3774 NE1 TRP A 475 37.226 52.747 86.432 1.00 19.52
ATOM 3775 CE2 TRP A 475 36.856 53.797 87.250 1.00 20.19
ATOM 3776 CE3 TRP A 475 35.396 54.132 89.154 1.00 17.53
ATOM 3777 CZ2 TRP A 475 37.225 55.156 87.232 1.00 18.93
ATOM 3778 CZ3 TRP A 475 35.782 55.462 89.148 1.00 19.08
ATOM 3779 CH2 TRP A 475 36.681 55.963 88.196 1.00 18.43
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ATOM 3781 CA ILE A 476 32.863 48.392 91.626 1.00 15.67
ATOM 3782 C ILE A 476 33.337 48.303 93.073 1.00 22.88
ATOM 3783 O ILE A 476 32.560 48.507 93.997 1.00 23.93
ATOM 3784 CB ILE A 476 32.381 47.041 91.149 1.00 18.98
ATOM 3785 CG1 ILE A 476 31.745 47.155 89.782 1.00 17.00
ATOM 3786 CG2 ILE A 476 31.515 46.303 92.172 1.00 21.59
ATOM 3787 CD1 ILE A 476 31.593 45.758 89.182 1.00 22.51
ATOM 3788 N THR A 477 34.607 47.988 93.292 1.00 20.07
ATOM 3789 CA THR A 477 35.098 47.868 94.662 1.00 20.33
ATOM 3790 C THR A 477 35.996 49.039 95.113 1.00 23.48
ATOM 3791 O THR A 477 36.579 49.045 96.212 1.00 21.35
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ATOM 3797 C ALA A 478 36.640 51.925 95.852 1.00 23.32
ATOM 3798 O ALA A 478 35.485 52.053 96.215 1.00 24.79

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ATOM 3799 CB ALA A 478 36.947 52.231 93.452 1.00 16.80
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ATOM 3801 CA LYS A 479 37.431 53.214 97.710 1.00 19.91
ATOM 3802 C LYS A 479 38.062 54.584 97.475 1.00 24.93
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ATOM 3806 CD LYS A 479 37.479 50.754 100.695 1.00 26.84
ATOM 3807 CE LYS A 479 36.139 50.430 101.349 1.00 61.23
ATOM 3808 NZ LYS A 479 35.893 48.993 101.540 1.00 56.94
ATOM 3809 N GLU A 480 37.915 55.478 98.461 1.00 20.21
ATOM 3810 CA GLU A 480 38.458 56.794 98.368 1.00 19.79
ATOM 3811 C GLU A 480 39.871 56.781 97.857 1.00 24.31
ATOM 3812 O GLU A 480 40.211 57.522 96.942 1.00 24.33
ATOM 3813 CB GLU A 480 38.450 57.539 99.736 1.00 23.77
ATOM 3814 CG GLU A 480 39.587 58.602 99.845 1.00 50.65
ATOM 3815 CD GLU A 480 40.676 58.361 100.891 1.00 92.31
ATOM 3816 OE1 GLU A 480 40.466 57.914 102.018 1.00100.00
ATOM 3817 OE2 GLU A 480 41.876 58.721 100.467 1.00 61.00
ATOM 3818 N ASP A 481 40.719 55.978 98.463 1.00 18.88
ATOM 3819 CA ASP A 481 42.108 55.960 98.058 1.00 20.42
ATOM 3820 C ASP A 481 42.402 55.419 96.666 1.00 24.75
ATOM 3821 O ASP A 481 43.568 55.429 96.273 1.00 24.36
ATOM 3822 CB ASP A 481 43.028 55.281 99.094 1.00 24.59
ATOM 3823 CG ASP A 481 42.801 53.787 99.146 1.00 32.90
ATOM 3824 OD1 ASP A 481 42.001 53.254 98.393 1.00 25.09
ATOM 3825 OD2 ASP A 481 43.502 53.151 100.099 1.00 15.96
ATOM 3826 N ASP A 482 41.403 54.934 95.911 1.00 20.60
ATOM 3827 CA ASP A 482 41.682 54.431 94.553 1.00 17.36
ATOM 3828 C ASP A 482 41.291 55.406 93.452 1.00 23.26
ATOM 3829 O ASP A 482 41.684 55.278 92.300 1.00 22.77
ATOM 3830 CB ASP A 482 40.957 53.088 94.261 1.00 19.83
ATOM 3831 CG ASP A 482 41.251 52.049 95.322 1.00 21.84
ATOM 3832 OD1 ASP A 482 42.350 51.577 95.508 1.00 26.18
ATOM 3833 OD2 ASP A 482 40.212 51.759 96.060 1.00 24.50
ATOM 3834 N LEU A 483 40.479 56.384 93.785 1.00 19.29
ATOM 3835 CA LEU A 483 39.994 57.287 92.761 1.00 19.61
ATOM 3836 C LEU A 483 41.047 58.011 91.918 1.00 28.05
ATOM 3837 O LEU A 483 40.892 58.164 90.689 1.00 23.72
ATOM 3838 CB LEU A 483 38.983 58.255 93.385 1.00 18.83
ATOM 3839 CG LEU A 483 37.801 57.488 93.925 1.00 21.23
ATOM 3840 CD1 LEU A 483 36.843 58.474 94.558 1.00 22.21
ATOM 3841 CD2 LEU A 483 37.102 56.761 92.775 1.00 21.62
ATOM 3842 N ASN A 484 42.109 58.476 92.604 1.00 24.68
ATOM 3843 CA ASN A 484 43.184 59.241 91.977 1.00 26.32
ATOM 3844 C ASN A 484 44.011 58.460 91.037 1.00 29.70
ATOM 3845 O ASN A 484 44.687 59.004 90.187 1.00 31.57
ATOM 3846 CB ASN A 484 44.126 59.910 92.991 1.00 36.64
ATOM 3847 CG ASN A 484 43.400 60.944 93.852 1.00100.00
ATOM 3848 OD1 ASN A 484 42.425 61.578 93.405 1.00100.00
ATOM 3849 ND2 ASN A 484 43.857 61.118 95.095 1.00100.00
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ATOM 3852 C SER A 485 44.060 56.018 89.023 1.00 28.05
ATOM 3853 O SER A 485 44.668 55.665 88.013 1.00 28.11
ATOM 3854 CB SER A 485 45.327 55.218 91.097 1.00 29.76
ATOM 3855 OG SER A 485 46.024 55.751 92.209 1.00 46.93
ATOM 3856 N PHE A 486 42.734 56.090 89.013 1.00 20.20

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ATOM   3858  C   PHE A 486      42.721  56.757  86.803  1.00 18.14
ATOM   3859  O   PHE A 486      43.058  57.852  87.215  1.00 17.89
ATOM   3860  CB  PHE A 486      40.634  55.739  87.757  1.00 18.39
ATOM   3861  CG  PHE A 486      40.103  54.583  88.557  1.00 16.02
ATOM   3862  CD1 PHE A 486      40.200  53.282  88.075  1.00 16.61
ATOM   3863  CD2 PHE A 486      39.465  54.795  89.773  1.00 18.83
ATOM   3864  CE1 PHE A 486      39.690  52.209  88.803  1.00 18.00
ATOM   3865  CE2 PHE A 486      38.945  53.737  90.521  1.00 19.85
ATOM   3866  CZ  PHE A 486      39.061  52.441  90.026  1.00 18.48
ATOM   3867  N   ASN A 487      42.861  56.383  85.562  1.00 21.79
ATOM   3868  CA  ASN A 487      43.441  57.269  84.603  1.00 23.98
ATOM   3869  C   ASN A 487      43.040  56.857  83.218  1.00 25.59
ATOM   3870  O   ASN A 487      42.702  55.697  82.974  1.00 25.22
ATOM   3871  CB  ASN A 487      44.971  57.094  84.710  1.00 27.75
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ATOM   3873  OD1 ASN A 487      45.861  57.971  82.652  1.00 29.73
ATOM   3874  ND2 ASN A 487      46.225  59.124  84.561  1.00 45.44
ATOM   3875  N   ALA A 488      43.112  57.831  82.323  1.00 24.55
ATOM   3876  CA  ALA A 488      42.772  57.622  80.931  1.00 27.10
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ATOM   3878  O   ALA A 488      43.193  55.858  79.348  1.00 34.84
ATOM   3879  CB  ALA A 488      42.935  58.913  80.151  1.00 29.22
ATOM   3880  N   THR A 489      44.724  56.236  80.941  1.00 29.49
ATOM   3881  CA  THR A 489      45.561  55.162  80.435  1.00 30.81
ATOM   3882  C   THR A 489      44.925  53.824  80.631  1.00 30.86
ATOM   3883  O   THR A 489      45.323  52.852  80.020  1.00 30.02
ATOM   3884  CB  THR A 489      46.976  55.160  81.011  1.00 38.41
ATOM   3885  OG1 THR A 489      46.912  55.010  82.404  1.00 41.46
ATOM   3886  CG2 THR A 489      47.637  56.480  80.660  1.00 38.83
ATOM   3887  N   ASP A 490      43.929  53.794  81.490  1.00 24.45
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ATOM   3889  C   ASP A 490      42.601  51.948  80.493  1.00 22.10
ATOM   3890  O   ASP A 490      42.425  50.748  80.402  1.00 22.01
ATOM   3891  CB  ASP A 490      42.088  52.721  82.799  1.00 25.90
ATOM   3892  CG  ASP A 490      42.562  53.055  84.171  1.00 24.88
ATOM   3893  OD1 ASP A 490      43.680  52.794  84.564  1.00 25.35
ATOM   3894  OD2 ASP A 490      41.658  53.659  84.887  1.00 19.90
ATOM   3895  N   LEU A 491      42.204  52.815  79.565  1.00 21.62
ATOM   3896  CA  LEU A 491      41.511  52.435  78.358  1.00 20.35
ATOM   3897  C   LEU A 491      42.419  52.134  77.204  1.00 24.60
ATOM   3898  O   LEU A 491      41.953  51.804  76.129  1.00 22.93
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ATOM   3900  CG  LEU A 491      39.675  53.966  79.142  1.00 21.34
ATOM   3901  CD1 LEU A 491      38.617  54.974  78.654  1.00 22.28
ATOM   3902  CD2 LEU A 491      39.047  52.741  79.833  1.00 13.64
ATOM   3903  N   LYS A 492      43.694  52.287  77.481  1.00 23.03
ATOM   3904  CA  LYS A 492      44.808  52.128  76.550  1.00 28.41
ATOM   3905  C   LYS A 492      44.622  51.088  75.458  1.00 32.14
ATOM   3906  O   LYS A 492      44.686  51.351  74.258  1.00 32.18
ATOM   3907  CB  LYS A 492      46.072  51.761  77.321  1.00 34.86
ATOM   3908  CG  LYS A 492      47.245  52.725  77.222  1.00 56.93
ATOM   3909  CD  LYS A 492      48.432  52.262  78.074  1.00 74.53
ATOM   3910  CE  LYS A 492      49.180  51.054  77.505  1.00 90.15
ATOM   3911  NZ  LYS A 492      50.604  50.994  77.883  1.00100.00
ATOM   3912  N   ASP A 493      44.458  49.873  75.850  1.00 30.30
ATOM   3913  CA  ASP A 493      44.351  48.861  74.816  1.00 33.58
ATOM   3914  C   ASP A 493      42.998  48.200  74.714  1.00 37.42
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ATOM	3916	CB	ASP	A	493	45.457	47.814	75.017	1.00	37.95
ATOM	3917	CG	ASP	A	493	46.796	48.476	75.218	1.00	55.04
ATOM	3918	OD1	ASP	A	493	47.339	49.149	74.345	1.00	60.98
ATOM	3919	OD2	ASP	A	493	47.283	48.292	76.433	1.00	44.86
ATOM	3920	N	LEU	A	494	41.953	48.969	75.054	1.00	27.85
ATOM	3921	CA	LEU	A	494	40.598	48.497	75.031	1.00	23.42
ATOM	3922	C	LEU	A	494	39.891	48.937	73.771	1.00	26.34
ATOM	3923	O	LEU	A	494	39.878	50.114	73.446	1.00	28.45
ATOM	3924	CB	LEU	A	494	39.835	49.057	76.234	1.00	21.52
ATOM	3925	CG	LEU	A	494	40.341	48.550	77.564	1.00	21.47
ATOM	3926	CD1	LEU	A	494	39.298	48.922	78.586	1.00	21.58
ATOM	3927	CD2	LEU	A	494	40.490	47.032	77.551	1.00	22.77
ATOM	3928	N	SER	A	495	39.288	47.978	73.065	1.00	18.61
ATOM	3929	CA	SER	A	495	38.543	48.304	71.882	1.00	18.82
ATOM	3930	C	SER	A	495	37.207	48.925	72.308	1.00	22.38
ATOM	3931	O	SER	A	495	36.791	48.850	73.479	1.00	18.55
ATOM	3932	CB	SER	A	495	38.244	47.030	71.131	1.00	20.60
ATOM	3933	OG	SER	A	495	37.346	46.263	71.937	1.00	24.08
ATOM	3934	N	SER	A	496	36.513	49.517	71.355	1.00	19.51
ATOM	3935	CA	SER	A	496	35.232	50.083	71.680	1.00	19.05
ATOM	3936	C	SER	A	496	34.360	48.953	72.243	1.00	22.03
ATOM	3937	O	SER	A	496	33.577	49.165	73.174	1.00	19.08
ATOM	3938	CB	SER	A	496	34.604	50.750	70.470	1.00	20.48
ATOM	3939	OG	SER	A	496	34.129	49.722	69.664	1.00	27.30
ATOM	3940	N	HIS	A	497	34.539	47.730	71.700	1.00	18.16
ATOM	3941	CA	HIS	A	497	33.804	46.555	72.180	1.00	18.79
ATOM	3942	C	HIS	A	497	34.034	46.302	73.674	1.00	21.10
ATOM	3943	O	HIS	A	497	33.119	45.976	74.445	1.00	20.24
ATOM	3944	CB	HIS	A	497	34.159	45.285	71.362	1.00	20.44
ATOM	3945	CG	HIS	A	497	33.757	45.504	69.949	1.00	28.33
ATOM	3946	ND1	HIS	A	497	34.663	45.976	68.994	1.00	33.99
ATOM	3947	CD2	HIS	A	497	32.527	45.413	69.366	1.00	31.27
ATOM	3948	CE1	HIS	A	497	33.977	46.117	67.860	1.00	33.65
ATOM	3949	NE2	HIS	A	497	32.690	45.785	68.060	1.00	33.66
ATOM	3950	N	GLN	A	498	35.281	46.439	74.074	1.00	18.94
ATOM	3951	CA	GLN	A	498	35.663	46.218	75.458	1.00	17.24
ATOM	3952	C	GLN	A	498	35.169	47.290	76.384	1.00	19.29
ATOM	3953	O	GLN	A	498	34.800	46.987	77.507	1.00	16.53
ATOM	3954	CB	GLN	A	498	37.149	45.987	75.601	1.00	17.60
ATOM	3955	CG	GLN	A	498	37.537	44.613	75.002	1.00	21.50
ATOM	3956	CD	GLN	A	498	39.031	44.468	74.905	1.00	24.22
ATOM	3957	OE1	GLN	A	498	39.659	45.268	74.241	1.00	19.69
ATOM	3958	NE2	GLN	A	498	39.597	43.501	75.602	1.00	20.25
ATOM	3959	N	LEU	A	499	35.129	48.539	75.916	1.00	20.34
ATOM	3960	CA	LEU	A	499	34.609	49.657	76.736	1.00	20.43
ATOM	3961	C	LEU	A	499	33.127	49.402	77.084	1.00	20.53
ATOM	3962	O	LEU	A	499	32.638	49.601	78.228	1.00	18.25
ATOM	3963	CB	LEU	A	499	34.620	50.962	75.921	1.00	21.15
ATOM	3964	CG	LEU	A	499	36.002	51.503	75.675	1.00	26.16
ATOM	3965	CD1	LEU	A	499	35.875	52.920	75.099	1.00	27.09
ATOM	3966	CD2	LEU	A	499	36.728	51.545	77.002	1.00	27.76
ATOM	3967	N	ASN	A	500	32.410	48.936	76.038	1.00	16.19
ATOM	3968	CA	ASN	A	500	31.009	48.628	76.174	1.00	14.95
ATOM	3969	C	ASN	A	500	30.755	47.507	77.191	1.00	15.08
ATOM	3970	O	ASN	A	500	29.853	47.590	78.034	1.00	16.94
ATOM	3971	CB	ASN	A	500	30.430	48.314	74.794	1.00	16.19
ATOM	3972	CG	ASN	A	500	28.938	48.113	74.817	1.00	26.36

ATOM 3973 OD1 ASN A 500 28.161 48.965 75.284 1.00 26.44
ATOM 3974 ND2 ASN A 500 28.532 46.966 74.321 1.00 28.52
ATOM 3975 N GLU A 501 31.558 46.458 77.099 1.00 11.19
ATOM 3976 CA GLU A 501 31.426 45.333 78.006 1.00 13.12
ATOM 3977 C GLU A 501 31.768 45.748 79.427 1.00 15.66
ATOM 3978 O GLU A 501 31.172 45.299 80.401 1.00 15.79
ATOM 3979 CB GLU A 501 32.343 44.197 77.600 1.00 16.26
ATOM 3980 CG GLU A 501 32.213 43.004 78.571 1.00 18.32
ATOM 3981 CD GLU A 501 30.807 42.412 78.640 1.00 45.05
ATOM 3982 OE1 GLU A 501 29.953 42.623 77.802 1.00 25.19
ATOM 3983 OE2 GLU A 501 30.582 41.647 79.694 1.00 28.99
ATOM 3984 N PHE A 502 32.758 46.625 79.528 1.00 13.04
ATOM 3985 CA PHE A 502 33.195 47.161 80.792 1.00 14.85
ATOM 3986 C PHE A 502 32.009 47.853 81.479 1.00 16.26
ATOM 3987 O PHE A 502 31.683 47.658 82.653 1.00 14.73
ATOM 3988 CB PHE A 502 34.343 48.173 80.519 1.00 17.18
ATOM 3989 CG PHE A 502 34.522 49.209 81.611 1.00 17.10
ATOM 3990 CD1 PHE A 502 34.862 48.837 82.909 1.00 16.09
ATOM 3991 CD2 PHE A 502 34.343 50.566 81.340 1.00 19.32
ATOM 3992 CE1 PHE A 502 35.023 49.787 83.920 1.00 19.64
ATOM 3993 CE2 PHE A 502 34.482 51.528 82.338 1.00 21.09
ATOM 3994 CZ PHE A 502 34.826 51.142 83.632 1.00 20.37
ATOM 3995 N LEU A 503 31.371 48.676 80.686 1.00 13.41
ATOM 3996 CA LEU A 503 30.240 49.412 81.162 1.00 14.23
ATOM 3997 C LEU A 503 29.077 48.486 81.516 1.00 17.32
ATOM 3998 O LEU A 503 28.386 48.671 82.526 1.00 16.59
ATOM 3999 CB LEU A 503 29.807 50.457 80.105 1.00 14.70
ATOM 4000 CG LEU A 503 30.726 51.674 80.068 1.00 17.55
ATOM 4001 CD1 LEU A 503 30.419 52.538 78.859 1.00 14.03
ATOM 4002 CD2 LEU A 503 30.471 52.511 81.298 1.00 16.66
ATOM 4003 N ALA A 504 28.850 47.485 80.656 1.00 13.74
ATOM 4004 CA ALA A 504 27.773 46.557 80.894 1.00 12.59
ATOM 4005 C ALA A 504 27.999 45.866 82.222 1.00 16.53
ATOM 4006 O ALA A 504 27.098 45.679 83.043 1.00 14.36
ATOM 4007 CB ALA A 504 27.728 45.522 79.764 1.00 12.80
ATOM 4008 N GLN A 505 29.248 45.463 82.436 1.00 15.92
ATOM 4009 CA GLN A 505 29.522 44.794 83.682 1.00 16.60
ATOM 4010 C GLN A 505 29.325 45.750 84.852 1.00 20.60
ATOM 4011 O GLN A 505 28.804 45.372 85.908 1.00 19.55
ATOM 4012 CB GLN A 505 30.918 44.175 83.723 1.00 17.18
ATOM 4013 CG GLN A 505 31.138 43.133 82.613 1.00 19.88
ATOM 4014 CD GLN A 505 32.590 42.647 82.571 1.00 41.41
ATOM 4015 OE1 GLN A 505 33.449 43.090 83.357 1.00 24.90
ATOM 4016 NE2 GLN A 505 32.879 41.752 81.640 1.00 25.28
ATOM 4017 N THR A 506 29.740 46.995 84.669 1.00 15.09
ATOM 4018 CA THR A 506 29.627 47.975 85.737 1.00 15.72
ATOM 4019 C THR A 506 28.197 48.252 86.095 1.00 20.52
ATOM 4020 O THR A 506 27.793 48.341 87.265 1.00 15.63
ATOM 4021 CB THR A 506 30.431 49.240 85.444 1.00 16.53
ATOM 4022 OG1 THR A 506 31.755 48.836 85.191 1.00 16.30
ATOM 4023 CG2 THR A 506 30.421 50.122 86.688 1.00 22.85
ATOM 4024 N LEU A 507 27.429 48.348 85.031 1.00 17.82
ATOM 4025 CA LEU A 507 26.016 48.618 85.160 1.00 18.18
ATOM 4026 C LEU A 507 25.279 47.542 85.935 1.00 22.38
ATOM 4027 O LEU A 507 24.366 47.842 86.695 1.00 18.84
ATOM 4028 CB LEU A 507 25.432 48.853 83.782 1.00 17.44
ATOM 4029 CG LEU A 507 23.998 49.231 83.794 1.00 17.74
ATOM 4030 CD1 LEU A 507 23.783 50.582 84.468 1.00 12.64

ATOM 4031 CD2 LEU A 507 23.610 49.318 82.335 1.00 22.64
ATOM 4032 N GLN A 508 25.686 46.285 85.754 1.00 18.81
ATOM 4033 CA GLN A 508 25.036 45.213 86.478 1.00 17.54
ATOM 4034 C GLN A 508 25.141 45.432 88.007 1.00 24.09
ATOM 4035 O GLN A 508 24.382 44.861 88.816 1.00 23.10
ATOM 4036 CB GLN A 508 25.655 43.859 86.136 1.00 17.62
ATOM 4037 CG GLN A 508 25.383 43.365 84.699 1.00 35.49
ATOM 4038 CD GLN A 508 25.734 41.880 84.540 1.00 39.81
ATOM 4039 OE1 GLN A 508 26.759 41.440 85.074 1.00 23.94
ATOM 4040 NE2 GLN A 508 24.870 41.090 83.871 1.00 20.37
ATOM 4041 N ARG A 509 26.085 46.268 88.430 1.00 19.00
ATOM 4042 CA ARG A 509 26.279 46.528 89.849 1.00 19.42
ATOM 4043 C ARG A 509 25.878 47.952 90.230 1.00 25.44
ATOM 4044 O ARG A 509 26.207 48.445 91.317 1.00 27.11
ATOM 4045 CB ARG A 509 27.696 46.182 90.352 1.00 20.80
ATOM 4046 CG ARG A 509 28.145 44.770 89.965 1.00 28.27
ATOM 4047 CD ARG A 509 27.749 43.726 90.993 1.00 46.76
ATOM 4048 NE ARG A 509 28.476 43.944 92.247 1.00 78.35
ATOM 4049 CZ ARG A 509 29.639 43.368 92.585 1.00 79.72
ATOM 4050 NH1 ARG A 509 30.276 42.489 91.795 1.00 53.80
ATOM 4051 NH2 ARG A 509 30.169 43.687 93.762 1.00 60.24
ATOM 4052 N ALA A 510 25.155 48.625 89.337 1.00 20.12
ATOM 4053 CA ALA A 510 24.752 49.967 89.669 1.00 18.42
ATOM 4054 C ALA A 510 23.784 49.926 90.838 1.00 25.78
ATOM 4055 O ALA A 510 23.077 48.939 91.025 1.00 23.74
ATOM 4056 CB ALA A 510 24.145 50.643 88.477 1.00 17.78
ATOM 4057 N PRO A 511 23.759 50.985 91.650 1.00 25.50
ATOM 4058 CA PRO A 511 24.544 52.194 91.447 1.00 23.03
ATOM 4059 C PRO A 511 25.898 52.188 92.076 1.00 23.95
ATOM 4060 O PRO A 511 26.156 51.518 93.052 1.00 22.19
ATOM 4061 CB PRO A 511 23.824 53.261 92.253 1.00 22.56
ATOM 4062 CG PRO A 511 23.137 52.505 93.370 1.00 29.69
ATOM 4063 CD PRO A 511 22.975 51.070 92.900 1.00 26.79
ATOM 4064 N LEU A 512 26.732 53.019 91.512 1.00 20.39
ATOM 4065 CA LEU A 512 28.028 53.234 92.046 1.00 21.08
ATOM 4066 C LEU A 512 27.901 54.569 92.773 1.00 24.40
ATOM 4067 O LEU A 512 26.977 55.361 92.485 1.00 22.11
ATOM 4068 CB LEU A 512 29.056 53.362 90.914 1.00 23.71
ATOM 4069 CG LEU A 512 29.726 52.029 90.535 1.00 29.56
ATOM 4070 CD1 LEU A 512 28.684 50.974 90.097 1.00 29.29
ATOM 4071 CD2 LEU A 512 30.679 52.329 89.388 1.00 35.20
ATOM 4072 N PRO A 513 28.795 54.837 93.722 1.00 20.62
ATOM 4073 CA PRO A 513 28.697 56.084 94.406 1.00 18.91
ATOM 4074 C PRO A 513 28.800 57.225 93.425 1.00 18.47
ATOM 4075 O PRO A 513 29.499 57.141 92.430 1.00 20.15
ATOM 4076 CB PRO A 513 29.806 56.075 95.479 1.00 20.51
ATOM 4077 CG PRO A 513 30.249 54.632 95.621 1.00 22.60
ATOM 4078 CD PRO A 513 29.764 53.913 94.390 1.00 19.80
ATOM 4079 N LEU A 514 28.089 58.293 93.711 1.00 16.89
ATOM 4080 CA LEU A 514 28.094 59.452 92.819 1.00 20.06
ATOM 4081 C LEU A 514 29.506 59.962 92.538 1.00 23.56
ATOM 4082 O LEU A 514 29.852 60.219 91.383 1.00 23.55
ATOM 4083 CB LEU A 514 27.127 60.561 93.299 1.00 20.30
ATOM 4084 CG LEU A 514 27.127 61.795 92.420 1.00 25.47
ATOM 4085 CD1 LEU A 514 26.627 61.425 91.029 1.00 29.21
ATOM 4086 CD2 LEU A 514 26.244 62.858 93.047 1.00 24.39
ATOM 4087 N GLY A 515 30.327 60.079 93.609 1.00 17.83
ATOM 4088 CA GLY A 515 31.688 60.532 93.469 1.00 16.95

ATOM 4089 C GLY A 515 32.448 59.638 92.469 1.00 23.12
ATOM 4090 O GLY A 515 33.286 60.105 91.687 1.00 23.24
ATOM 4091 N HIS A 516 32.150 58.337 92.477 1.00 19.26
ATOM 4092 CA HIS A 516 32.835 57.435 91.550 1.00 18.68
ATOM 4093 C HIS A 516 32.466 57.705 90.105 1.00 17.66
ATOM 4094 O HIS A 516 33.295 57.751 89.221 1.00 17.29
ATOM 4095 CB HIS A 516 32.617 55.957 91.861 1.00 18.09
ATOM 4096 CG HIS A 516 33.216 55.585 93.169 1.00 23.48
ATOM 4097 ND1 HIS A 516 33.588 54.271 93.463 1.00 27.23
ATOM 4098 CD2 HIS A 516 33.486 56.344 94.256 1.00 26.54
ATOM 4099 CE1 HIS A 516 34.072 54.256 94.699 1.00 25.60
ATOM 4100 NE2 HIS A 516 34.028 55.481 95.205 1.00 27.20
ATOM 4101 N ILE A 517 31.198 57.925 89.871 1.00 15.26
ATOM 4102 CA ILE A 517 30.787 58.158 88.523 1.00 16.45
ATOM 4103 C ILE A 517 31.347 59.465 88.034 1.00 17.88
ATOM 4104 O ILE A 517 31.807 59.622 86.910 1.00 17.44
ATOM 4105 CB ILE A 517 29.274 58.016 88.371 1.00 23.63
ATOM 4106 CG1 ILE A 517 28.826 56.606 88.810 1.00 25.40
ATOM 4107 CG2 ILE A 517 28.830 58.270 86.925 1.00 26.36
ATOM 4108 CD1 ILE A 517 29.394 55.444 87.985 1.00 22.65
ATOM 4109 N LYS A 518 31.344 60.426 88.912 1.00 16.53
ATOM 4110 CA LYS A 518 31.906 61.699 88.505 1.00 17.58
ATOM 4111 C LYS A 518 33.372 61.521 88.084 1.00 20.03
ATOM 4112 O LYS A 518 33.826 62.082 87.101 1.00 16.13
ATOM 4113 CB LYS A 518 31.770 62.744 89.631 1.00 15.25
ATOM 4114 CG LYS A 518 30.350 63.266 89.751 1.00 14.67
ATOM 4115 CD LYS A 518 30.170 64.148 90.965 1.00 20.03
ATOM 4116 CE LYS A 518 28.844 64.880 90.939 1.00 32.46
ATOM 4117 NZ LYS A 518 28.728 65.790 92.088 1.00 50.93
ATOM 4118 N ARG A 519 34.110 60.724 88.865 1.00 18.45
ATOM 4119 CA ARG A 519 35.512 60.472 88.617 1.00 15.13
ATOM 4120 C ARG A 519 35.683 59.760 87.297 1.00 18.23
ATOM 4121 O ARG A 519 36.584 60.047 86.503 1.00 17.57
ATOM 4122 CB ARG A 519 36.138 59.655 89.746 1.00 13.90
ATOM 4123 CG ARG A 519 37.604 59.313 89.444 1.00 15.17
ATOM 4124 CD ARG A 519 38.522 60.538 89.464 1.00 25.46
ATOM 4125 NE ARG A 519 39.959 60.229 89.280 1.00 25.30
ATOM 4126 CZ ARG A 519 40.836 61.098 88.768 1.00 29.02
ATOM 4127 NH1 ARG A 519 40.478 62.322 88.355 1.00 25.41
ATOM 4128 NH2 ARG A 519 42.093 60.731 88.649 1.00 20.47
ATOM 4129 N MET A 520 34.784 58.815 87.054 1.00 15.71
ATOM 4130 CA MET A 520 34.835 58.067 85.805 1.00 13.65
ATOM 4131 C MET A 520 34.710 59.019 84.593 1.00 17.01
ATOM 4132 O MET A 520 35.395 58.879 83.606 1.00 17.28
ATOM 4133 CB MET A 520 33.761 56.964 85.799 1.00 16.80
ATOM 4134 CG MET A 520 33.859 55.982 84.649 1.00 18.55
ATOM 4135 SD MET A 520 32.566 54.696 84.755 1.00 21.68
ATOM 4136 CE MET A 520 32.937 53.918 86.347 1.00 20.68
ATOM 4137 N GLN A 521 33.846 60.027 84.664 1.00 15.21
ATOM 4138 CA GLN A 521 33.744 60.956 83.548 1.00 12.55
ATOM 4139 C GLN A 521 35.045 61.773 83.498 1.00 20.15
ATOM 4140 O GLN A 521 35.588 62.037 82.399 1.00 16.73
ATOM 4141 CB GLN A 521 32.488 61.843 83.607 1.00 10.92
ATOM 4142 CG GLN A 521 32.572 63.141 82.741 1.00 15.12
ATOM 4143 CD GLN A 521 32.750 62.919 81.235 1.00 22.48
ATOM 4144 OE1 GLN A 521 33.241 63.822 80.479 1.00 23.27
ATOM 4145 NE2 GLN A 521 32.374 61.737 80.773 1.00 12.45
ATOM 4146 N GLU A 522 35.577 62.168 84.681 1.00 17.95

ATOM 4147 CA GLU A 522 36.821 62.966 84.706 1.00 17.15
ATOM 4148 C GLU A 522 38.007 62.218 84.051 1.00 25.41
ATOM 4149 O GLU A 522 38.860 62.814 83.370 1.00 20.91
ATOM 4150 CB GLU A 522 37.318 63.258 86.109 1.00 19.27
ATOM 4151 CG GLU A 522 36.560 64.272 86.977 1.00 38.73
ATOM 4152 CD GLU A 522 37.423 64.542 88.180 1.00 59.23
ATOM 4153 OE1 GLU A 522 38.353 65.321 88.160 1.00 77.57
ATOM 4154 OE2 GLU A 522 37.148 63.788 89.208 1.00 62.80
ATOM 4155 N VAL A 523 38.120 60.903 84.278 1.00 19.75
ATOM 4156 CA VAL A 523 39.249 60.212 83.691 1.00 16.48
ATOM 4157 C VAL A 523 39.045 59.583 82.320 1.00 19.65
ATOM 4158 O VAL A 523 40.003 59.432 81.578 1.00 20.76
ATOM 4159 CB VAL A 523 39.870 59.234 84.668 1.00 19.84
ATOM 4160 CG1 VAL A 523 40.209 59.969 85.953 1.00 19.70
ATOM 4161 CG2 VAL A 523 38.892 58.115 84.997 1.00 19.64
ATOM 4162 N TYR A 524 37.810 59.186 81.966 1.00 17.18
ATOM 4163 CA TYR A 524 37.566 58.516 80.679 1.00 12.15
ATOM 4164 C TYR A 524 36.817 59.313 79.623 1.00 17.66
ATOM 4165 O TYR A 524 36.767 58.933 78.451 1.00 16.12
ATOM 4166 CB TYR A 524 36.860 57.185 80.860 1.00 11.05
ATOM 4167 CG TYR A 524 37.563 56.240 81.797 1.00 14.57
ATOM 4168 CD1 TYR A 524 38.948 56.199 81.935 1.00 13.44
ATOM 4169 CD2 TYR A 524 36.784 55.367 82.556 1.00 16.79
ATOM 4170 CE1 TYR A 524 39.530 55.296 82.832 1.00 16.24
ATOM 4171 CE2 TYR A 524 37.354 54.455 83.443 1.00 18.03
ATOM 4172 CZ TYR A 524 38.739 54.419 83.580 1.00 25.46
ATOM 4173 OH TYR A 524 39.305 53.514 84.463 1.00 20.75
ATOM 4174 N ASN A 525 36.209 60.400 80.039 1.00 16.08
ATOM 4175 CA ASN A 525 35.485 61.243 79.098 1.00 16.42
ATOM 4176 C ASN A 525 34.439 60.482 78.253 1.00 20.20
ATOM 4177 O ASN A 525 34.305 60.658 77.022 1.00 18.84
ATOM 4178 CB ASN A 525 36.460 62.041 78.243 1.00 16.14
ATOM 4179 CG ASN A 525 35.744 63.162 77.527 1.00 23.40
ATOM 4180 OD1 ASN A 525 34.621 63.545 77.906 1.00 17.28
ATOM 4181 ND2 ASN A 525 36.376 63.686 76.478 1.00 18.64
ATOM 4182 N PHE A 526 33.653 59.641 78.949 1.00 16.41
ATOM 4183 CA PHE A 526 32.619 58.905 78.279 1.00 15.86
ATOM 4184 C PHE A 526 31.540 59.825 77.704 1.00 19.88
ATOM 4185 O PHE A 526 30.864 59.459 76.754 1.00 17.12
ATOM 4186 CB PHE A 526 32.011 57.849 79.207 1.00 18.58
ATOM 4187 CG PHE A 526 32.899 56.644 79.394 1.00 21.46
ATOM 4188 CD1 PHE A 526 33.760 56.218 78.378 1.00 26.02
ATOM 4189 CD2 PHE A 526 32.880 55.920 80.587 1.00 21.37
ATOM 4190 CE1 PHE A 526 34.569 55.090 78.523 1.00 24.79
ATOM 4191 CE2 PHE A 526 33.686 54.792 80.758 1.00 21.37
ATOM 4192 CZ PHE A 526 34.517 54.368 79.721 1.00 20.49
ATOM 4193 N ASN A 527 31.322 61.012 78.276 1.00 15.47
ATOM 4194 CA ASN A 527 30.290 61.867 77.727 1.00 13.11
ATOM 4195 C ASN A 527 30.607 62.185 76.300 1.00 19.43
ATOM 4196 O ASN A 527 29.735 62.562 75.517 1.00 19.12
ATOM 4197 CB ASN A 527 30.211 63.232 78.409 1.00 16.84
ATOM 4198 CG ASN A 527 29.525 63.216 79.754 1.00 27.65
ATOM 4199 OD1 ASN A 527 29.633 64.170 80.558 1.00 22.99
ATOM 4200 ND2 ASN A 527 28.811 62.142 80.005 1.00 12.18
ATOM 4201 N ALA A 528 31.886 62.083 75.972 1.00 17.86
ATOM 4202 CA ALA A 528 32.302 62.431 74.611 1.00 19.52
ATOM 4203 C ALA A 528 32.076 61.351 73.550 1.00 23.88
ATOM 4204 O ALA A 528 32.179 61.595 72.360 1.00 19.92

ATOM 4205 CB ALA A 528 33.777 62.815 74.605 1.00 20.88
ATOM 4206 N ILE A 529 31.832 60.132 73.967 1.00 18.40
ATOM 4207 CA ILE A 529 31.678 59.056 73.009 1.00 16.46
ATOM 4208 C ILE A 529 30.326 59.065 72.332 1.00 21.76
ATOM 4209 O ILE A 529 29.305 59.139 72.984 1.00 22.99
ATOM 4210 CB ILE A 529 31.946 57.755 73.756 1.00 19.71
ATOM 4211 CG1 ILE A 529 33.474 57.651 73.951 1.00 18.95
ATOM 4212 CG2 ILE A 529 31.364 56.591 72.951 1.00 18.71
ATOM 4213 CD1 ILE A 529 33.945 56.461 74.761 1.00 22.33
ATOM 4214 N ASN A 530 30.294 58.969 71.026 1.00 22.69
ATOM 4215 CA ASN A 530 29.002 58.981 70.353 1.00 23.57
ATOM 4216 C ASN A 530 28.409 57.630 69.959 1.00 26.83
ATOM 4217 O ASN A 530 27.248 57.564 69.552 1.00 26.76
ATOM 4218 CB ASN A 530 28.984 59.978 69.203 1.00 38.14
ATOM 4219 CG ASN A 530 29.071 61.399 69.728 1.00 61.28
ATOM 4220 OD1 ASN A 530 28.136 61.910 70.369 1.00 58.85
ATOM 4221 ND2 ASN A 530 30.207 62.029 69.479 1.00 53.69
ATOM 4222 N ASN A 531 29.217 56.571 70.074 1.00 21.41
ATOM 4223 CA ASN A 531 28.830 55.193 69.793 1.00 18.74
ATOM 4224 C ASN A 531 27.582 54.954 70.629 1.00 20.62
ATOM 4225 O ASN A 531 27.591 55.148 71.848 1.00 20.50
ATOM 4226 CB ASN A 531 29.973 54.294 70.281 1.00 19.20
ATOM 4227 CG ASN A 531 29.636 52.824 70.208 1.00 31.49
ATOM 4228 OD1 ASN A 531 28.663 52.353 70.848 1.00 22.31
ATOM 4229 ND2 ASN A 531 30.431 52.095 69.406 1.00 18.30
ATOM 4230 N SER A 532 26.489 54.584 69.996 1.00 16.48
ATOM 4231 CA SER A 532 25.237 54.445 70.724 1.00 16.29
ATOM 4232 C SER A 532 25.164 53.417 71.856 1.00 18.06
ATOM 4233 O SER A 532 24.508 53.629 72.888 1.00 20.46
ATOM 4234 CB SER A 532 24.032 54.424 69.782 1.00 22.96
ATOM 4235 OG SER A 532 24.151 53.318 68.884 1.00 27.85
ATOM 4236 N GLU A 533 25.811 52.298 71.667 1.00 12.93
ATOM 4237 CA GLU A 533 25.776 51.257 72.657 1.00 13.78
ATOM 4238 C GLU A 533 26.436 51.733 73.911 1.00 22.43
ATOM 4239 O GLU A 533 25.912 51.551 75.031 1.00 20.25
ATOM 4240 CB GLU A 533 26.502 50.013 72.130 1.00 15.68
ATOM 4241 CG GLU A 533 25.676 49.346 71.022 1.00 16.38
ATOM 4242 CD GLU A 533 24.472 48.583 71.547 1.00 31.64
ATOM 4243 OE1 GLU A 533 24.351 48.232 72.709 1.00 26.24
ATOM 4244 OE2 GLU A 533 23.567 48.306 70.632 1.00 22.18
ATOM 4245 N ILE A 534 27.623 52.323 73.715 1.00 16.64
ATOM 4246 CA ILE A 534 28.399 52.848 74.844 1.00 15.19
ATOM 4247 C ILE A 534 27.683 53.998 75.530 1.00 14.80
ATOM 4248 O ILE A 534 27.557 54.017 76.751 1.00 16.34
ATOM 4249 CB ILE A 534 29.804 53.292 74.421 1.00 17.45
ATOM 4250 CG1 ILE A 534 30.604 52.045 74.021 1.00 16.13
ATOM 4251 CG2 ILE A 534 30.489 54.104 75.543 1.00 16.10
ATOM 4252 CD1 ILE A 534 31.844 52.338 73.172 1.00 19.66
ATOM 4253 N ARG A 535 27.209 54.955 74.757 1.00 13.65
ATOM 4254 CA ARG A 535 26.513 56.082 75.384 1.00 15.71
ATOM 4255 C ARG A 535 25.292 55.619 76.182 1.00 14.83
ATOM 4256 O ARG A 535 25.031 56.046 77.295 1.00 16.79
ATOM 4257 CB ARG A 535 26.077 57.102 74.357 1.00 19.62
ATOM 4258 CG ARG A 535 25.578 58.396 75.006 1.00 14.05
ATOM 4259 CD ARG A 535 25.425 59.486 73.947 1.00 13.02
ATOM 4260 NE ARG A 535 25.150 60.773 74.553 1.00 19.81
ATOM 4261 CZ ARG A 535 26.071 61.555 75.128 1.00 31.45
ATOM 4262 NH1 ARG A 535 27.361 61.233 75.186 1.00 28.13

ATOM	4263	NH2	ARG	A	535	25.687	62.706	75.647	1.00	22.19
ATOM	4264	N	PHE	A	536	24.536	54.737	75.575	1.00	13.92
ATOM	4265	CA	PHE	A	536	23.389	54.204	76.215	1.00	12.79
ATOM	4266	C	PHE	A	536	23.740	53.693	77.615	1.00	14.46
ATOM	4267	O	PHE	A	536	23.149	54.108	78.611	1.00	16.15
ATOM	4268	CB	PHE	A	536	22.900	53.039	75.342	1.00	15.26
ATOM	4269	CG	PHE	A	536	21.850	52.203	76.023	1.00	16.37
ATOM	4270	CD1	PHE	A	536	20.709	52.802	76.552	1.00	16.83
ATOM	4271	CD2	PHE	A	536	21.994	50.824	76.169	1.00	19.63
ATOM	4272	CE1	PHE	A	536	19.722	52.046	77.174	1.00	16.86
ATOM	4273	CE2	PHE	A	536	21.021	50.049	76.803	1.00	20.21
ATOM	4274	CZ	PHE	A	536	19.882	50.670	77.316	1.00	17.52
ATOM	4275	N	ARG	A	537	24.690	52.747	77.674	1.00	11.77
ATOM	4276	CA	ARG	A	537	25.105	52.121	78.937	1.00	11.76
ATOM	4277	C	ARG	A	537	25.696	53.100	79.956	1.00	18.24
ATOM	4278	O	ARG	A	537	25.473	52.999	81.174	1.00	17.20
ATOM	4279	CB	ARG	A	537	26.019	50.937	78.709	1.00	13.64
ATOM	4280	CG	ARG	A	537	25.267	49.722	78.148	1.00	13.64
ATOM	4281	CD	ARG	A	537	26.131	48.455	77.966	1.00	15.77
ATOM	4282	NE	ARG	A	537	25.256	47.437	77.410	1.00	15.36
ATOM	4283	CZ	ARG	A	537	24.877	47.385	76.148	1.00	21.63
ATOM	4284	NH1	ARG	A	537	25.365	48.200	75.215	1.00	14.82
ATOM	4285	NH2	ARG	A	537	23.988	46.465	75.821	1.00	20.40
ATOM	4286	N	TRP	A	538	26.472	54.053	79.436	1.00	13.41
ATOM	4287	CA	TRP	A	538	27.065	55.079	80.266	1.00	13.47
ATOM	4288	C	TRP	A	538	25.957	55.943	80.903	1.00	17.87
ATOM	4289	O	TRP	A	538	25.954	56.171	82.099	1.00	16.80
ATOM	4290	CB	TRP	A	538	28.037	55.924	79.407	1.00	11.54
ATOM	4291	CG	TRP	A	538	28.492	57.235	80.033	1.00	12.21
ATOM	4292	CD1	TRP	A	538	28.350	58.451	79.472	1.00	15.63
ATOM	4293	CD2	TRP	A	538	29.203	57.461	81.276	1.00	11.84
ATOM	4294	NE1	TRP	A	538	28.889	59.415	80.286	1.00	15.48
ATOM	4295	CE2	TRP	A	538	29.428	58.838	81.379	1.00	15.91
ATOM	4296	CE3	TRP	A	538	29.634	56.621	82.304	1.00	13.93
ATOM	4297	CZ2	TRP	A	538	30.064	59.418	82.466	1.00	16.48
ATOM	4298	CZ3	TRP	A	538	30.278	57.180	83.382	1.00	15.59
ATOM	4299	CH2	TRP	A	538	30.489	58.571	83.461	1.00	16.98
ATOM	4300	N	LEU	A	539	24.995	56.427	80.100	1.00	13.56
ATOM	4301	CA	LEU	A	539	23.950	57.251	80.649	1.00	13.46
ATOM	4302	C	LEU	A	539	23.109	56.517	81.690	1.00	16.76
ATOM	4303	O	LEU	A	539	22.704	57.102	82.675	1.00	17.06
ATOM	4304	CB	LEU	A	539	23.074	57.929	79.554	1.00	15.88
ATOM	4305	CG	LEU	A	539	23.865	58.813	78.563	1.00	16.07
ATOM	4306	CD1	LEU	A	539	22.966	59.449	77.529	1.00	16.70
ATOM	4307	CD2	LEU	A	539	24.614	59.889	79.304	1.00	14.42
ATOM	4308	N	ARG	A	540	22.856	55.223	81.481	1.00	16.81
ATOM	4309	CA	ARG	A	540	22.096	54.425	82.436	1.00	16.05
ATOM	4310	C	ARG	A	540	22.821	54.404	83.764	1.00	18.54
ATOM	4311	O	ARG	A	540	22.263	54.664	84.821	1.00	20.40
ATOM	4312	CB	ARG	A	540	21.887	52.973	81.974	1.00	15.71
ATOM	4313	CG	ARG	A	540	21.026	52.845	80.716	1.00	19.20
ATOM	4314	CD	ARG	A	540	20.461	51.430	80.612	1.00	21.64
ATOM	4315	NE	ARG	A	540	19.576	51.166	81.748	1.00	21.09
ATOM	4316	CZ	ARG	A	540	18.903	50.051	81.977	1.00	30.30
ATOM	4317	NH1	ARG	A	540	19.003	49.003	81.176	1.00	22.34
ATOM	4318	NH2	ARG	A	540	18.101	49.987	83.047	1.00	32.88
ATOM	4319	N	LEU	A	541	24.093	54.091	83.685	1.00	12.62
ATOM	4320	CA	LEU	A	541	24.942	54.027	84.860	1.00	13.44

ATOM 4321 C LEU A 541 24.921 55.334 85.630 1.00 19.38
ATOM 4322 O LEU A 541 24.891 55.375 86.850 1.00 18.05
ATOM 4323 CB LEU A 541 26.389 53.723 84.435 1.00 14.55
ATOM 4324 CG LEU A 541 27.377 53.612 85.612 1.00 17.61
ATOM 4325 CD1 LEU A 541 26.967 52.499 86.584 1.00 14.91
ATOM 4326 CD2 LEU A 541 28.783 53.322 85.082 1.00 13.20
ATOM 4327 N CYS A 542 24.948 56.425 84.883 1.00 18.18
ATOM 4328 CA CYS A 542 24.927 57.747 85.455 1.00 16.56
ATOM 4329 C CYS A 542 23.589 58.013 86.138 1.00 17.68
ATOM 4330 O CYS A 542 23.550 58.514 87.247 1.00 17.12
ATOM 4331 CB CYS A 542 25.159 58.811 84.353 1.00 16.15
ATOM 4332 SG CYS A 542 26.884 58.903 83.797 1.00 18.89
ATOM 4333 N ILE A 543 22.485 57.696 85.448 1.00 15.90
ATOM 4334 CA ILE A 543 21.158 57.935 85.991 1.00 15.89
ATOM 4335 C ILE A 543 20.912 57.085 87.207 1.00 19.52
ATOM 4336 O ILE A 543 20.450. 57.530 88.248 1.00 14.90
ATOM 4337 CB ILE A 543 20.089 57.759 84.922 1.00 16.53
ATOM 4338 CG1 ILE A 543 20.267 58.837 83.862 1.00 16.25
ATOM 4339 CG2 ILE A 543 18.719 57.890 85.524 1.00 13.95
ATOM 4340 CD1 ILE A 543 20.224 60.275 84.423 1.00 23.20
ATOM 4341 N GLN A 544 21.265 55.846 87.062 1.00 16.81
ATOM 4342 CA GLN A 544 21.083 54.915 88.140 1.00 16.91
ATOM 4343 C GLN A 544 21.919 55.264 89.338 1.00 21.44
ATOM 4344 O GLN A 544 21.560 54.872 90.464 1.00 17.71
ATOM 4345 CB GLN A 544 21.329 53.469 87.676 1.00 17.14
ATOM 4346 CG GLN A 544 20.245 53.073 86.660 1.00 16.46
ATOM 4347 CD GLN A 544 20.353 51.658 86.156 1.00 18.46
ATOM 4348 OE1 GLN A 544 19.958 51.363 85.017 1.00 29.64
ATOM 4349 NE2 GLN A 544 20.821 50.768 87.006 1.00 14.23
ATOM 4350 N SER A 545 23.022 56.011 89.083 1.00 16.96
ATOM 4351 CA SER A 545 23.920 56.419 90.172 1.00 16.35
ATOM 4352 C SER A 545 23.576 57.773 90.757 1.00 21.69
ATOM 4353 O SER A 545 24.314 58.320 91.571 1.00 20.97
ATOM 4354 CB SER A 545 25.389 56.331 89.822 1.00 14.78
ATOM 4355 OG SER A 545 25.645 54.989 89.461 1.00 16.47
ATOM 4356 N LYS A 546 22.445 58.295 90.299 1.00 19.83
ATOM 4357 CA LYS A 546 21.919 59.553 90.748 1.00 18.17
ATOM 4358 C LYS A 546 22.682 60.775 90.346 1.00 20.74
ATOM 4359 O LYS A 546 22.744 61.705 91.136 1.00 20.74
ATOM 4360 CB LYS A 546 21.757 59.578 92.245 1.00 17.98
ATOM 4361 CG LYS A 546 21.192 58.279 92.761 1.00 19.40
ATOM 4362 CD LYS A 546 19.811 57.972 92.190 1.00 24.16
ATOM 4363 CE LYS A 546 19.182 56.724 92.840 1.00 30.41
ATOM 4364 NZ LYS A 546 17.911 56.281 92.237 1.00 21.29
ATOM 4365 N TRP A 547 23.227 60.817 89.147 1.00 16.41
ATOM 4366 CA TRP A 547 23.944 61.999 88.742 1.00 15.28
ATOM 4367 C TRP A 547 23.027 62.921 88.034 1.00 20.17
ATOM 4368 O TRP A 547 22.649 62.672 86.908 1.00 20.03
ATOM 4369 CB TRP A 547 25.133 61.647 87.854 1.00 15.66
ATOM 4370 CG TRP A 547 26.127 62.755 87.670 1.00 15.61
ATOM 4371 CD1 TRP A 547 26.146 63.957 88.330 1.00 18.93
ATOM 4372 CD2 TRP A 547 27.249 62.756 86.796 1.00 14.82
ATOM 4373 NE1 TRP A 547 27.232 64.678 87.930 1.00 18.02
ATOM 4374 CE2 TRP A 547 27.923 63.965 86.989 1.00 18.89
ATOM 4375 CE3 TRP A 547 27.763 61.827 85.888 1.00 18.21
ATOM 4376 CZ2 TRP A 547 29.068 64.290 86.254 1.00 19.21
ATOM 4377 CZ3 TRP A 547 28.903 62.124 85.188 1.00 20.09
ATOM 4378 CH2 TRP A 547 29.553 63.343 85.365 1.00 20.78

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ATOM	4379	N	GLU	A	548	22.658	64.011	88.682	1.00 16.10
ATOM	4380	CA	GLU	A	548	21.761	64.914	88.029	1.00 17.50
ATOM	4381	C	GLU	A	548	22.257	65.492	86.730	1.00 19.53
ATOM	4382	O	GLU	A	548	21.456	65.804	85.870	1.00 19.12
ATOM	4383	CB	GLU	A	548	21.247	66.016	88.969	1.00 19.98
ATOM	4384	CG	GLU	A	548	20.555	65.419	90.229	1.00 24.06
ATOM	4385	CD	GLU	A	548	20.077	66.445	91.243	1.00 33.90
ATOM	4386	OE1	GLU	A	548	19.441	67.440	90.965	1.00 43.66
ATOM	4387	OE2	GLU	A	548	20.393	66.129	92.465	1.00 43.45
ATOM	4388	N	ASP	A	549	23.555	65.667	86.569	1.00 16.60
ATOM	4389	CA	ASP	A	549	24.054	66.258	85.351	1.00 14.55
ATOM	4390	C	ASP	A	549	23.736	65.449	84.132	1.00 18.68
ATOM	4391	O	ASP	A	549	23.663	65.937	82.985	1.00 18.55
ATOM	4392	CB	ASP	A	549	25.554	66.515	85.439	1.00 15.80
ATOM	4393	CG	ASP	A	549	25.809	67.504	86.537	1.00 31.75
ATOM	4394	OD1	ASP	A	549	25.557	68.672	86.421	1.00 37.38
ATOM	4395	OD2	ASP	A	549	26.188	66.966	87.658	1.00 56.37
ATOM	4396	N	ALA	A	550	23.531	64.199	84.392	1.00 15.83
ATOM	4397	CA	ALA	A	550	23.243	63.296	83.304	1.00 16.81
ATOM	4398	C	ALA	A	550	21.793	63.312	82.827	1.00 22.33
ATOM	4399	O	ALA	A	550	21.496	62.708	81.787	1.00 22.90
ATOM	4400	CB	ALA	A	550	23.681	61.866	83.678	1.00 15.17
ATOM	4401	N	ILE	A	551	20.885	63.965	83.563	1.00 17.67
ATOM	4402	CA	ILE	A	551	19.468	63.990	83.178	1.00 17.00
ATOM	4403	C	ILE	A	551	19.205	64.533	81.787	1.00 19.27
ATOM	4404	O	ILE	A	551	18.489	63.951	80.967	1.00 19.75
ATOM	4405	CB	ILE	A	551	18.660	64.767	84.195	1.00 20.59
ATOM	4406	CG1	ILE	A	551	18.688	64.024	85.537	1.00 20.00
ATOM	4407	CG2	ILE	A	551	17.234	65.035	83.688	1.00 17.64
ATOM	4408	CD1	ILE	A	551	18.004	64.753	86.709	1.00 22.00
ATOM	4409	N	PRO	A	552	19.786	65.669	81.492	1.00 18.31
ATOM	4410	CA	PRO	A	552	19.587	66.261	80.192	1.00 18.26
ATOM	4411	C	PRO	A	552	20.131	65.378	79.089	1.00 19.47
ATOM	4412	O	PRO	A	552	19.542	65.280	78.001	1.00 19.84
ATOM	4413	CB	PRO	A	552	20.313	67.600	80.184	1.00 20.28
ATOM	4414	CG	PRO	A	552	21.074	67.684	81.493	1.00 25.73
ATOM	4415	CD	PRO	A	552	20.636	66.508	82.349	1.00 20.00
ATOM	4416	N	LEU	A	553	21.255	64.732	79.344	1.00 15.41
ATOM	4417	CA	LEU	A	553	21.827	63.866	78.302	1.00 16.23
ATOM	4418	C	LEU	A	553	20.953	62.634	78.024	1.00 22.52
ATOM	4419	O	LEU	A	553	20.787	62.169	76.889	1.00 21.48
ATOM	4420	CB	LEU	A	553	23.235	63.408	78.700	1.00 16.94
ATOM	4421	CG	LEU	A	553	24.171	64.557	79.088	1.00 22.66
ATOM	4422	CD1	LEU	A	553	25.563	63.989	79.402	1.00 20.12
ATOM	4423	CD2	LEU	A	553	24.288	65.558	77.934	1.00 24.27
ATOM	4424	N	ALA	A	554	20.407	62.088	79.094	1.00 19.11
ATOM	4425	CA	ALA	A	554	19.586	60.907	78.982	1.00 15.78
ATOM	4426	C	ALA	A	554	18.288	61.247	78.315	1.00 18.70
ATOM	4427	O	ALA	A	554	17.822	60.504	77.457	1.00 18.11
ATOM	4428	CB	ALA	A	554	19.372	60.252	80.325	1.00 13.78
ATOM	4429	N	LEU	A	555	17.711	62.384	78.695	1.00 14.55
ATOM	4430	CA	LEU	A	555	16.450	62.765	78.083	1.00 16.26
ATOM	4431	C	LEU	A	555	16.624	63.002	76.596	1.00 21.06
ATOM	4432	O	LEU	A	555	15.757	62.691	75.774	1.00 19.79
ATOM	4433	CB	LEU	A	555	15.895	64.065	78.654	1.00 16.61
ATOM	4434	CG	LEU	A	555	15.266	63.935	80.034	1.00 25.68
ATOM	4435	CD1	LEU	A	555	15.074	65.355	80.626	1.00 25.00
ATOM	4436	CD2	LEU	A	555	13.931	63.190	79.901	1.00 26.60

ATOM	4437	N	LYS	A	556	17.770	63.597	76.263	1.00 19.69
ATOM	4438	CA	LYS	A	556	18.092	63.918	74.886	1.00 17.75
ATOM	4439	C	LYS	A	556	18.260	62.667	74.065	1.00 20.15
ATOM	4440	O	LYS	A	556	17.727	62.531	72.962	1.00 20.20
ATOM	4441	CB	LYS	A	556	19.343	64.773	74.847	1.00 21.25
ATOM	4442	CG	LYS	A	556	19.518	65.514	73.537	1.00 57.55
ATOM	4443	CD	LYS	A	556	20.912	65.351	72.936	1.00 78.14
ATOM	4444	CE	LYS	A	556	21.873	66.491	73.247	1.00 85.39
ATOM	4445	NZ	LYS	A	556	22.965	66.584	72.261	1.00 90.20
ATOM	4446	N	MET	A	557	19.011	61.732	74.607	1.00 16.39
ATOM	4447	CA	MET	A	557	19.241	60.514	73.863	1.00 16.19
ATOM	4448	C	MET	A	557	17.948	59.731	73.605	1.00 22.82
ATOM	4449	O	MET	A	557	17.714	59.142	72.523	1.00 19.87
ATOM	4450	CB	MET	A	557	20.286	59.635	74.589	1.00 17.35
ATOM	4451	CG	MET	A	557	20.489	58.320	73.829	1.00 20.22
ATOM	4452	SD	MET	A	557	21.933	57.357	74.325	1.00 22.67
ATOM	4453	CE	MET	A	557	21.962	56.107	73.009	1.00 16.66
ATOM	4454	N	ALA	A	558	17.110	59.724	74.644	1.00 18.95
ATOM	4455	CA	ALA	A	558	15.857	59.013	74.607	1.00 20.49
ATOM	4456	C	ALA	A	558	14.856	59.525	73.592	1.00 27.56
ATOM	4457	O	ALA	A	558	14.019	58.768	73.100	1.00 25.54
ATOM	4458	CB	ALA	A	558	15.223	58.968	75.988	1.00 19.57
ATOM	4459	N	THR	A	559	14.933	60.811	73.295	1.00 22.11
ATOM	4460	CA	THR	A	559	13.967	61.381	72.407	1.00 20.16
ATOM	4461	C	THR	A	559	14.539	61.680	71.057	1.00 22.76
ATOM	4462	O	THR	A	559	13.797	61.814	70.094	1.00 24.26
ATOM	4463	CB	THR	A	559	13.369	62.652	73.069	1.00 24.38
ATOM	4464	OG1	THR	A	559	14.413	63.571	73.345	1.00 22.44
ATOM	4465	CG2	THR	A	559	12.691	62.323	74.399	1.00 20.52
ATOM	4466	N	GLU	A	560	15.844	61.818	70.974	1.00 20.87
ATOM	4467	CA	GLU	A	560	16.484	62.130	69.690	1.00 22.00
ATOM	4468	C	GLU	A	560	16.577	60.919	68.736	1.00 24.16
ATOM	4469	O	GLU	A	560	16.808	61.067	67.544	1.00 21.97
ATOM	4470	CB	GLU	A	560	17.886	62.698	69.862	1.00 24.33
ATOM	4471	CG	GLU	A	560	17.972	64.085	70.540	1.00 45.69
ATOM	4472	CD	GLU	A	560	19.325	64.716	70.282	1.00 59.21
ATOM	4473	OE1	GLU	A	560	20.368	64.080	70.224	1.00 76.40
ATOM	4474	OE2	GLU	A	560	19.242	66.006	70.150	1.00 50.76
ATOM	4475	N	GLN	A	561	16.443	59.733	69.302	1.00 18.19
ATOM	4476	CA	GLN	A	561	16.435	58.488	68.551	1.00 18.56
ATOM	4477	C	GLN	A	561	15.316	57.658	69.172	1.00 24.31
ATOM	4478	O	GLN	A	561	14.881	57.985	70.297	1.00 21.89
ATOM	4479	CB	GLN	A	561	17.796	57.762	68.447	1.00 21.24
ATOM	4480	CG	GLN	A	561	18.427	57.414	69.817	1.00 20.65
ATOM	4481	CD	GLN	A	561	17.659	56.319	70.483	1.00 24.21
ATOM	4482	OE1	GLN	A	561	17.249	56.444	71.613	1.00 22.02
ATOM	4483	NE2	GLN	A	561	17.435	55.247	69.768	1.00 14.46
ATOM	4484	N	GLY	A	562	14.810	56.634	68.460	1.00 18.50
ATOM	4485	CA	GLY	A	562	13.708	55.890	68.996	1.00 18.40
ATOM	4486	C	GLY	A	562	13.899	54.398	69.026	1.00 18.79
ATOM	4487	O	GLY	A	562	12.930	53.640	69.121	1.00 21.01
ATOM	4488	N	ARG	A	563	15.143	53.969	68.898	1.00 16.62
ATOM	4489	CA	ARG	A	563	15.420	52.558	68.958	1.00 16.35
ATOM	4490	C	ARG	A	563	14.974	52.117	70.373	1.00 20.36
ATOM	4491	O	ARG	A	563	15.467	52.617	71.384	1.00 16.28
ATOM	4492	CB	ARG	A	563	16.912	52.339	68.690	1.00 12.16
ATOM	4493	CG	ARG	A	563	17.330	50.882	68.531	1.00 12.19
ATOM	4494	CD	ARG	A	563	18.837	50.780	68.393	1.00 14.10

ATOM 4495 NE ARG A 563 19.313 49.407 68.387 1.00 18.90
ATOM 4496 CZ ARG A 563 20.573 49.140 68.134 1.00 24.90
ATOM 4497 NH1 ARG A 563 21.436 50.117 67.850 1.00 21.86
ATOM 4498 NH2 ARG A 563 20.970 47.875 68.121 1.00 25.10
ATOM 4499 N MET A 564 13.983 51.212 70.448 1.00 18.13
ATOM 4500 CA MET A 564 13.425 50.773 71.729 1.00 17.97
ATOM 4501 C MET A 564 14.436 50.274 72.756 1.00 21.65
ATOM 4502 O MET A 564 14.291 50.503 73.958 1.00 19.02
ATOM 4503 CB MET A 564 12.231 49.809 71.540 1.00 18.77
ATOM 4504 CG MET A 564 11.120 50.498 70.779 1.00 22.52
ATOM 4505 SD MET A 564 9.651 49.485 70.814 1.00 30.74
ATOM 4506 CE MET A 564 10.140 48.213 69.638 1.00 26.15
ATOM 4507 N LYS A 565 15.446 49.560 72.248 1.00 18.83
ATOM 4508 CA LYS A 565 16.540 49.011 73.032 1.00 19.08
ATOM 4509 C LYS A 565 17.141 50.110 73.924 1.00 18.89
ATOM 4510 O LYS A 565 17.592 49.852 75.027 1.00 16.93
ATOM 4511 CB LYS A 565 17.595 48.485 72.063 1.00 15.54
ATOM 4512 CG LYS A 565 18.769 47.873 72.740 1.00 20.37
ATOM 4513 CD LYS A 565 19.871 47.486 71.768 1.00 19.32
ATOM 4514 CE LYS A 565 20.892 46.604 72.452 1.00 27.76
ATOM 4515 NZ LYS A 565 22.112 46.360 71.670 1.00 21.11
ATOM 4516 N PHE A 566 17.142 51.345 73.423 1.00 14.76
ATOM 4517 CA PHE A 566 17.708 52.462 74.159 1.00 13.39
ATOM 4518 C PHE A 566 16.651 53.323 74.834 1.00 17.12
ATOM 4519 O PHE A 566 16.733 53.674 76.007 1.00 14.88
ATOM 4520 CB PHE A 566 18.580 53.378 73.266 1.00 12.33
ATOM 4521 CG PHE A 566 19.692 52.683 72.484 1.00 14.16
ATOM 4522 CD1 PHE A 566 20.411 51.604 73.016 1.00 15.94
ATOM 4523 CD2 PHE A 566 20.015 53.131 71.193 1.00 16.01
ATOM 4524 CE1 PHE A 566 21.421 50.974 72.277 1.00 15.47
ATOM 4525 CE2 PHE A 566 21.018 52.522 70.431 1.00 14.85
ATOM 4526 CZ PHE A 566 21.713 51.444 70.991 1.00 15.39
ATOM 4527 N THR A 567 15.683 53.708 74.040 1.00 16.88
ATOM 4528 CA THR A 567 14.608 54.584 74.493 1.00 15.59
ATOM 4529 C THR A 567 13.824 54.079 75.697 1.00 17.49
ATOM 4530 O THR A 567 13.596 54.845 76.653 1.00 17.50
ATOM 4531 CB THR A 567 13.683 54.960 73.329 1.00 18.44
ATOM 4532 OG1 THR A 567 14.397 55.788 72.420 1.00 17.49
ATOM 4533 CG2 THR A 567 12.423 55.652 73.866 1.00 20.99
ATOM 4534 N ARG A 568 13.411 52.800 75.655 1.00 14.94
ATOM 4535 CA ARG A 568 12.639 52.235 76.761 1.00 15.43
ATOM 4536 C ARG A 568 13.335 52.286 78.121 1.00 18.16
ATOM 4537 O ARG A 568 12.789 52.796 79.084 1.00 16.87
ATOM 4538 CB ARG A 568 12.071 50.875 76.423 1.00 13.94
ATOM 4539 CG ARG A 568 11.026 51.000 75.302 1.00 11.32
ATOM 4540 CD ARG A 568 10.386 49.656 74.991 1.00 14.79
ATOM 4541 NE ARG A 568 9.659 49.172 76.147 1.00 18.40
ATOM 4542 CZ ARG A 568 9.166 47.960 76.287 1.00 25.32
ATOM 4543 NH1 ARG A 568 9.322 47.012 75.354 1.00 16.84
ATOM 4544 NH2 ARG A 568 8.496 47.696 77.410 1.00 16.63
ATOM 4545 N PRO A 569 14.548 51.776 78.168 1.00 14.13
ATOM 4546 CA PRO A 569 15.334 51.744 79.400 1.00 16.57
ATOM 4547 C PRO A 569 15.749 53.092 79.904 1.00 18.71
ATOM 4548 O PRO A 569 15.827 53.337 81.125 1.00 17.63
ATOM 4549 CB PRO A 569 16.576 50.883 79.101 1.00 19.20
ATOM 4550 CG PRO A 569 16.246 50.089 77.834 1.00 19.00
ATOM 4551 CD PRO A 569 15.150 50.887 77.122 1.00 15.84
ATOM 4552 N LEU A 570 16.001 53.996 78.973 1.00 16.41

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ATOM   4553  CA  LEU A 570      16.379  55.355  79.382  1.00 17.76
ATOM   4554  C   LEU A 570      15.192  56.062  80.084  1.00 22.35
ATOM   4555  O   LEU A 570      15.339  56.681  81.150  1.00 20.52
ATOM   4556  CB  LEU A 570      16.876  56.202  78.185  1.00 17.74
ATOM   4557  CG  LEU A 570      18.296  55.843  77.759  1.00 20.79
ATOM   4558  CD1 LEU A 570      18.664  56.566  76.470  1.00 18.50
ATOM   4559  CD2 LEU A 570      19.279  56.172  78.884  1.00 20.34
ATOM   4560  N   PHE A 571      14.005  55.963  79.462  1.00 17.16
ATOM   4561  CA  PHE A 571      12.826  56.555  80.047  1.00 17.72
ATOM   4562  C   PHE A 571      12.554  55.878  81.375  1.00 19.54
ATOM   4563  O   PHE A 571      12.169  56.500  82.372  1.00 24.27
ATOM   4564  CB  PHE A 571      11.594  56.425  79.152  1.00 18.46
ATOM   4565  CG  PHE A 571      11.415  57.641  78.282  1.00 18.32
ATOM   4566  CD1 PHE A 571      11.028  58.863  78.832  1.00 16.11
ATOM   4567  CD2 PHE A 571      11.600  57.569  76.902  1.00 18.39
ATOM   4568  CE1 PHE A 571      10.842  59.978  78.024  1.00 17.51
ATOM   4569  CE2 PHE A 571      11.422  58.679  76.075  1.00 20.05
ATOM   4570  CZ  PHE A 571      11.027  59.888  76.644  1.00 19.54
ATOM   4571  N   LYS A 572      12.776  54.599  81.388  1.00 13.24
ATOM   4572  CA  LYS A 572      12.546  53.877  82.604  1.00 17.24
ATOM   4573  C   LYS A 572      13.501  54.286  83.726  1.00 22.30
ATOM   4574  O   LYS A 572      13.093  54.481  84.887  1.00 21.20
ATOM   4575  CB  LYS A 572      12.453  52.388  82.395  1.00 19.92
ATOM   4576  CG  LYS A 572      11.041  51.827  82.560  1.00 39.47
ATOM   4577  CD  LYS A 572      10.969  50.322  82.245  1.00 59.94
ATOM   4578  CE  LYS A 572      10.997  49.992  80.743  1.00 81.81
ATOM   4579  NZ  LYS A 572      11.621  48.696  80.395  1.00 84.56
ATOM   4580  N   ASP A 573      14.765  54.436  83.393  1.00 16.20
ATOM   4581  CA  ASP A 573      15.705  54.847  84.435  1.00 15.22
ATOM   4582  C   ASP A 573      15.383  56.235  84.891  1.00 19.06
ATOM   4583  O   ASP A 573      15.417  56.504  86.077  1.00 18.49
ATOM   4584  CB  ASP A 573      17.178  54.824  83.992  1.00 15.52
ATOM   4585  CG  ASP A 573      17.694  53.409  83.853  1.00 24.76
ATOM   4586  OD1 ASP A 573      17.057  52.435  84.197  1.00 25.70
ATOM   4587  OD2 ASP A 573      18.888  53.321  83.312  1.00 28.57
ATOM   4588  N   LEU A 574      15.092  57.114  83.921  1.00 15.30
ATOM   4589  CA  LEU A 574      14.779  58.489  84.243  1.00 17.34
ATOM   4590  C   LEU A 574      13.530  58.595  85.127  1.00 26.84
ATOM   4591  O   LEU A 574      13.410  59.473  86.004  1.00 25.00
ATOM   4592  CB  LEU A 574      14.608  59.351  82.977  1.00 17.58
ATOM   4593  CG  LEU A 574      15.900  59.592  82.190  1.00 22.57
ATOM   4594  CD1 LEU A 574      15.486  60.046  80.797  1.00 21.18
ATOM   4595  CD2 LEU A 574      16.728  60.721  82.822  1.00 19.82
ATOM   4596  N   ALA A 575      12.585  57.681  84.914  1.00 21.02
ATOM   4597  CA  ALA A 575      11.372  57.702  85.706  1.00 20.85
ATOM   4598  C   ALA A 575      11.629  57.263  87.153  1.00 26.51
ATOM   4599  O   ALA A 575      10.984  57.699  88.094  1.00 26.29
ATOM   4600  CB  ALA A 575      10.281  56.868  85.028  1.00 20.37
ATOM   4601  N   ALA A 576      12.588  56.369  87.330  1.00 22.53
ATOM   4602  CA  ALA A 576      12.943  55.823  88.633  1.00 20.07
ATOM   4603  C   ALA A 576      13.819  56.734  89.456  1.00 25.99
ATOM   4604  O   ALA A 576      14.057  56.473  90.625  1.00 25.87
ATOM   4605  CB  ALA A 576      13.702  54.547  88.427  1.00 20.99
ATOM   4606  N   PHE A 577      14.322  57.780  88.812  1.00 22.37
ATOM   4607  CA  PHE A 577      15.190  58.748  89.447  1.00 18.54
ATOM   4608  C   PHE A 577      14.308  59.899  89.930  1.00 24.27
ATOM   4609  O   PHE A 577      13.634  60.584  89.140  1.00 22.66
ATOM   4610  CB  PHE A 577      16.330  59.182  88.468  1.00 17.20
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ATOM 4611 CG PHE A 577 17.388 60.135 89.029 1.00 20.29
ATOM 4612 CD1 PHE A 577 17.608 60.272 90.405 1.00 21.38
ATOM 4613 CD2 PHE A 577 18.181 60.895 88.160 1.00 22.30
ATOM 4614 CE1 PHE A 577 18.591 61.145 90.888 1.00 22.36
ATOM 4615 CE2 PHE A 577 19.169 61.769 88.622 1.00 21.90
ATOM 4616 CZ PHE A 577 19.364 61.899 89.998 1.00 19.38
ATOM 4617 N ASP A 578 14.288 60.104 91.245 1.00 22.86
ATOM 4618 CA ASP A 578 13.434 61.134 91.791 1.00 25.52
ATOM 4619 C ASP A 578 13.561 62.456 91.107 1.00 27.85
ATOM 4620 O ASP A 578 12.570 63.076 90.708 1.00 30.77
ATOM 4621 CB ASP A 578 13.476 61.245 93.327 1.00 33.08
ATOM 4622 CG ASP A 578 14.786 61.757 93.883 1.00 55.02
ATOM 4623 OD1 ASP A 578 15.756 62.050 93.182 1.00 53.04
ATOM 4624 OD2 ASP A 578 14.750 61.865 95.202 1.00 63.74
ATOM 4625 N LYS A 579 14.804 62.870 90.966 1.00 22.71
ATOM 4626 CA LYS A 579 15.127 64.115 90.359 1.00 20.47
ATOM 4627 C LYS A 579 14.602 64.319 88.957 1.00 28.20
ATOM 4628 O LYS A 579 14.298 65.451 88.583 1.00 31.58
ATOM 4629 CB LYS A 579 16.617 64.350 90.417 1.00 22.01
ATOM 4630 CG LYS A 579 17.095 64.370 91.843 1.00 35.26
ATOM 4631 CD LYS A 579 17.107 65.791 92.377 1.00 60.65
ATOM 4632 CE LYS A 579 16.489 65.928 93.762 1.00 72.01
ATOM 4633 NZ LYS A 579 16.747 64.783 94.655 1.00 60.98
ATOM 4634 N SER A 580 14.521 63.273 88.144 1.00 21.08
ATOM 4635 CA SER A 580 14.055 63.477 86.749 1.00 20.19
ATOM 4636 C SER A 580 12.692 62.922 86.402 1.00 23.42
ATOM 4637 O SER A 580 12.270 63.056 85.257 1.00 23.98
ATOM 4638 CB SER A 580 14.999 62.794 85.775 1.00 17.94
ATOM 4639 OG SER A 580 15.249 61.485 86.256 1.00 16.46
ATOM 4640 N HIS A 581 12.041 62.278 87.369 1.00 20.59
ATOM 4641 CA HIS A 581 10.745 61.645 87.151 1.00 20.64
ATOM 4642 C HIS A 581 9.685 62.510 86.446 1.00 23.45
ATOM 4643 O HIS A 581 9.171 62.178 85.387 1.00 22.42
ATOM 4644 CB HIS A 581 10.236 61.004 88.450 1.00 22.31
ATOM 4645 CG HIS A 581 8.875 60.458 88.269 1.00 28.87
ATOM 4646 ND1 HIS A 581 7.755 61.242 88.508 1.00 32.80
ATOM 4647 CD2 HIS A 581 8.459 59.235 87.851 1.00 31.70
ATOM 4648 CE1 HIS A 581 6.689 60.483 88.239 1.00 32.67
ATOM 4649 NE2 HIS A 581 7.081 59.276 87.843 1.00 33.25
ATOM 4650 N ASP A 582 9.364 63.646 87.038 1.00 19.72
ATOM 4651 CA ASP A 582 8.382 64.520 86.470 1.00 21.79
ATOM 4652 C ASP A 582 8.739 64.940 85.060 1.00 27.16
ATOM 4653 O ASP A 582 7.897 64.998 84.144 1.00 28.34
ATOM 4654 CB ASP A 582 8.193 65.739 87.407 1.00 22.66
ATOM 4655 CG ASP A 582 7.617 65.295 88.714 1.00 35.28
ATOM 4656 OD1 ASP A 582 7.257 64.154 88.903 1.00 42.01
ATOM 4657 OD2 ASP A 582 7.558 66.227 89.631 1.00 44.04
ATOM 4658 N GLN A 583 10.014 65.255 84.896 1.00 23.25
ATOM 4659 CA GLN A 583 10.489 65.680 83.602 1.00 22.94
ATOM 4660 C GLN A 583 10.398 64.574 82.561 1.00 26.53
ATOM 4661 O GLN A 583 10.081 64.823 81.401 1.00 26.28
ATOM 4662 CB GLN A 583 11.924 66.186 83.684 1.00 24.39
ATOM 4663 CG GLN A 583 12.338 66.800 82.345 1.00 34.12
ATOM 4664 CD GLN A 583 13.593 67.633 82.479 1.00 48.91
ATOM 4665 OE1 GLN A 583 14.375 67.475 83.428 1.00 36.93
ATOM 4666 NE2 GLN A 583 13.780 68.531 81.530 1.00 46.01
ATOM 4667 N ALA A 584 10.709 63.349 82.975 1.00 21.00
ATOM 4668 CA ALA A 584 10.651 62.208 82.070 1.00 19.24

ATOM	4669	C	ALA	A	584	9.226	62.047	81.565	1.00	23.67
ATOM	4670	O	ALA	A	584	8.954	61.865	80.369	1.00	22.58
ATOM	4671	CB	ALA	A	584	11.065	60.917	82.774	1.00	18.73
ATOM	4672	N	VAL	A	585	8.294	62.113	82.511	1.00	21.42
ATOM	4673	CA	VAL	A	585	6.890	61.970	82.136	1.00	21.62
ATOM	4674	C	VAL	A	585	6.440	63.073	81.179	1.00	25.77
ATOM	4675	O	VAL	A	585	5.878	62.863	80.080	1.00	23.19
ATOM	4676	CB	VAL	A	585	6.011	61.832	83.364	1.00	22.75
ATOM	4677	CG1	VAL	A	585	4.531	61.886	82.991	1.00	21.75
ATOM	4678	CG2	VAL	A	585	6.333	60.513	84.039	1.00	20.15
ATOM	4679	N	ARG	A	586	6.736	64.281	81.604	1.00	22.25
ATOM	4680	CA	ARG	A	586	6.389	65.399	80.796	1.00	22.85
ATOM	4681	C	ARG	A	586	7.011	65.340	79.403	1.00	21.49
ATOM	4682	O	ARG	A	586	6.392	65.724	78.438	1.00	20.15
ATOM	4683	CB	ARG	A	586	6.643	66.694	81.550	1.00	21.80
ATOM	4684	CG	ARG	A	586	6.769	67.894	80.646	1.00	40.65
ATOM	4685	CD	ARG	A	586	6.961	69.211	81.412	1.00	46.26
ATOM	4686	NE	ARG	A	586	8.104	69.262	82.340	1.00	66.08
ATOM	4687	CZ	ARG	A	586	8.125	68.752	83.595	1.00	77.90
ATOM	4688	NH1	ARG	A	586	7.093	68.104	84.137	1.00	76.53
ATOM	4689	NH2	ARG	A	586	9.213	68.893	84.340	1.00	37.12
ATOM	4690	N	THR	A	587	8.239	64.868	79.288	1.00	18.33
ATOM	4691	CA	THR	A	587	8.919	64.768	78.009	1.00	18.54
ATOM	4692	C	THR	A	587	8.231	63.731	77.124	1.00	24.37
ATOM	4693	O	THR	A	587	8.076	63.892	75.912	1.00	22.43
ATOM	4694	CB	THR	A	587	10.392	64.386	78.216	1.00	25.90
ATOM	4695	OG1	THR	A	587	11.009	65.370	79.004	1.00	24.10
ATOM	4696	CG2	THR	A	587	11.145	64.257	76.897	1.00	24.64
ATOM	4697	N	TYR	A	588	7.810	62.641	77.732	1.00	20.51
ATOM	4698	CA	TYR	A	588	7.137	61.633	76.948	1.00	21.29
ATOM	4699	C	TYR	A	588	5.805	62.178	76.423	1.00	25.70
ATOM	4700	O	TYR	A	588	5.426	62.029	75.270	1.00	26.35
ATOM	4701	CB	TYR	A	588	6.880	60.388	77.801	1.00	21.73
ATOM	4702	CG	TYR	A	588	5.843	59.484	77.194	1.00	21.63
ATOM	4703	CD1	TYR	A	588	6.155	58.679	76.098	1.00	23.34
ATOM	4704	CD2	TYR	A	588	4.542	59.442	77.699	1.00	21.46
ATOM	4705	CE1	TYR	A	588	5.200	57.838	75.519	1.00	22.02
ATOM	4706	CE2	TYR	A	588	3.569	58.612	77.138	1.00	19.76
ATOM	4707	CZ	TYR	A	588	3.912	57.809	76.051	1.00	22.20
ATOM	4708	OH	TYR	A	588	2.980	57.006	75.486	1.00	24.63
ATOM	4709	N	GLN	A	589	5.070	62.811	77.313	1.00	21.16
ATOM	4710	CA	GLN	A	589	3.791	63.379	76.959	1.00	18.99
ATOM	4711	C	GLN	A	589	3.932	64.331	75.796	1.00	23.96
ATOM	4712	O	GLN	A	589	3.147	64.342	74.861	1.00	25.39
ATOM	4713	CB	GLN	A	589	3.159	64.084	78.178	1.00	18.67
ATOM	4714	CG	GLN	A	589	2.565	63.058	79.167	1.00	18.97
ATOM	4715	CD	GLN	A	589	1.533	62.109	78.536	1.00	35.01
ATOM	4716	OE1	GLN	A	589	1.474	61.882	77.318	1.00	46.83
ATOM	4717	NE2	GLN	A	589	0.695	61.539	79.370	1.00	34.55
ATOM	4718	N	GLU	A	590	4.964	65.137	75.866	1.00	22.44
ATOM	4719	CA	GLU	A	590	5.220	66.108	74.832	1.00	22.90
ATOM	4720	C	GLU	A	590	5.634	65.492	73.541	1.00	27.13
ATOM	4721	O	GLU	A	590	5.393	66.064	72.491	1.00	25.81
ATOM	4722	CB	GLU	A	590	6.215	67.205	75.232	1.00	24.05
ATOM	4723	CG	GLU	A	590	5.752	67.882	76.538	1.00	41.64
ATOM	4724	CD	GLU	A	590	6.719	68.923	77.003	1.00	55.37
ATOM	4725	OE1	GLU	A	590	7.910	68.887	76.720	1.00	49.14
ATOM	4726	OE2	GLU	A	590	6.139	69.861	77.721	1.00	43.77

ATOM 4727 N HIS A 591 6.236 64.331 73.621 1.00 20.51
ATOM 4728 CA HIS A 591 6.705 63.689 72.427 1.00 20.30
ATOM 4729 C HIS A 591 5.844 62.634 71.880 1.00 20.71
ATOM 4730 O HIS A 591 6.020 62.301 70.730 1.00 23.08
ATOM 4731 CB HIS A 591 8.021 62.980 72.735 1.00 22.13
ATOM 4732 CG HIS A 591 9.134 63.910 72.585 1.00 27.37
ATOM 4733 ND1 HIS A 591 9.350 64.905 73.514 1.00 32.24
ATOM 4734 CD2 HIS A 591 10.050 64.036 71.610 1.00 30.23
ATOM 4735 CE1 HIS A 591 10.394 65.614 73.093 1.00 30.35
ATOM 4736 NE2 HIS A 591 10.834 65.114 71.950 1.00 30.36
ATOM 4737 N LYS A 592 4.981 62.058 72.690 1.00 19.93
ATOM 4738 CA LYS A 592 4.222 60.927 72.217 1.00 20.77
ATOM 4739 C LYS A 592 3.601 60.982 70.861 1.00 28.72
ATOM 4740 O LYS A 592 3.593 59.977 70.155 1.00 27.45
ATOM 4741 CB LYS A 592 3.385 60.231 73.220 1.00 20.94
ATOM 4742 CG LYS A 592 2.269 61.119 73.659 1.00 26.07
ATOM 4743 CD LYS A 592 1.524 60.461 74.795 1.00 37.26
ATOM 4744 CE LYS A 592 0.074 60.869 74.892 1.00 41.30
ATOM 4745 NZ LYS A 592 -0.431 60.656 76.253 1.00 36.28
ATOM 4746 N ALA A 593 3.071 62.155 70.502 1.00 25.89
ATOM 4747 CA ALA A 593 2.425 62.314 69.218 1.00 21.81
ATOM 4748 C ALA A 593 3.318 62.160 68.009 1.00 25.37
ATOM 4749 O ALA A 593 2.861 61.805 66.945 1.00 25.18
ATOM 4750 CB ALA A 593 1.750 63.647 69.131 1.00 21.84
ATOM 4751 N SER A 594 4.580 62.455 68.168 1.00 23.89
ATOM 4752 CA SER A 594 5.511 62.388 67.071 1.00 24.88
ATOM 4753 C SER A 594 6.352 61.123 67.101 1.00 24.51
ATOM 4754 O SER A 594 7.234 60.930 66.268 1.00 22.77
ATOM 4755 CB SER A 594 6.416 63.613 67.130 1.00 29.32
ATOM 4756 OG SER A 594 7.414 63.407 68.127 1.00 41.59
ATOM 4757 N MET A 595 6.086 60.268 68.086 1.00 18.86
ATOM 4758 CA MET A 595 6.833 59.020 68.227 1.00 17.56
ATOM 4759 C MET A 595 6.287 57.889 67.337 1.00 25.09
ATOM 4760 O MET A 595 5.191 57.954 66.773 1.00 25.50
ATOM 4761 CB MET A 595 6.757 58.535 69.691 1.00 17.79
ATOM 4762 CG MET A 595 7.773 59.190 70.601 1.00 20.14
ATOM 4763 SD MET A 595 7.484 58.807 72.362 1.00 26.49
ATOM 4764 CE MET A 595 8.038 57.091 72.509 1.00 25.07
ATOM 4765 N HIS A 596 7.034 56.805 67.252 1.00 19.17
ATOM 4766 CA HIS A 596 6.579 55.642 66.529 1.00 17.82
ATOM 4767 C HIS A 596 5.439 55.071 67.368 1.00 21.26
ATOM 4768 O HIS A 596 5.507 55.088 68.584 1.00 19.86
ATOM 4769 CB HIS A 596 7.725 54.631 66.359 1.00 17.98
ATOM 4770 CG HIS A 596 7.296 53.435 65.598 1.00 21.21
ATOM 4771 ND1 HIS A 596 7.650 53.262 64.263 1.00 23.53
ATOM 4772 CD2 HIS A 596 6.533 52.381 65.973 1.00 21.57
ATOM 4773 CE1 HIS A 596 7.107 52.127 63.835 1.00 21.62
ATOM 4774 NE2 HIS A 596 6.424 51.576 64.838 1.00 23.64
ATOM 4775 N PRO A 597 4.376 54.594 66.708 1.00 22.03
ATOM 4776 CA PRO A 597 3.204 54.055 67.346 1.00 21.29
ATOM 4777 C PRO A 597 3.446 52.997 68.383 1.00 20.96
ATOM 4778 O PRO A 597 2.877 53.012 69.466 1.00 19.67
ATOM 4779 CB PRO A 597 2.335 53.455 66.245 1.00 23.54
ATOM 4780 CG PRO A 597 2.979 53.792 64.915 1.00 29.04
ATOM 4781 CD PRO A 597 4.235 54.587 65.227 1.00 23.85
ATOM 4782 N VAL A 598 4.261 52.031 68.050 1.00 18.54
ATOM 4783 CA VAL A 598 4.519 50.962 69.019 1.00 18.98
ATOM 4784 C VAL A 598 5.343 51.457 70.212 1.00 19.53

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ATOM   4785  O   VAL A 598       5.006  51.250  71.377  1.00 19.84
ATOM   4786  CB  VAL A 598       5.183  49.780  68.314  1.00 23.28
ATOM   4787  CG1 VAL A 598       5.682  48.758  69.335  1.00 21.86
ATOM   4788  CG2 VAL A 598       4.147  49.166  67.349  1.00 21.78
ATOM   4789  N   THR A 599       6.428  52.147  69.888  1.00 18.22
ATOM   4790  CA  THR A 599       7.297  52.711  70.898  1.00 19.79
ATOM   4791  C   THR A 599       6.470  53.600  71.805  1.00 22.38
ATOM   4792  O   THR A 599       6.579  53.587  73.020  1.00 20.86
ATOM   4793  CB  THR A 599       8.373  53.567  70.223  1.00 26.72
ATOM   4794  OG1 THR A 599       9.045  52.824  69.204  1.00 25.41
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ATOM 4795 CG2 THR A 599 9.358 54.074 71.281 1.00 22.33
ATOM 4796 N ALA A 600 5.624 54.399 71.191 1.00 19.36
ATOM 4797 CA ALA A 600 4.787 55.270 71.986 1.00 19.90
ATOM 4798 C ALA A 600 3.925 54.468 72.927 1.00 22.41
ATOM 4799 O ALA A 600 3.777 54.778 74.119 1.00 21.96
ATOM 4800 CB ALA A 600 3.947 56.186 71.118 1.00 19.84
ATOM 4801 N MET A 601 3.354 53.399 72.411 1.00 19.95
ATOM 4802 CA MET A 601 2.524 52.589 73.302 1.00 20.17
ATOM 4803 C MET A 601 3.320 51.981 74.446 1.00 21.18
ATOM 4804 O MET A 601 2.884 51.994 75.589 1.00 19.90
ATOM 4805 CB MET A 601 1.791 51.451 72.582 1.00 21.67
ATOM 4806 CG MET A 601 1.011 50.612 73.557 1.00 23.15
ATOM 4807 SD MET A 601 1.925 49.137 74.147 1.00 28.58
ATOM 4808 CE MET A 601 2.227 48.228 72.603 1.00 23.92
ATOM 4809 N LEU A 602 4.490 51.422 74.122 1.00 16.35
ATOM 4810 CA LEU A 602 5.338 50.773 75.139 1.00 17.71
ATOM 4811 C LEU A 602 5.921 51.708 76.223 1.00 18.68
ATOM 4812 O LEU A 602 5.963 51.362 77.395 1.00 21.69
ATOM 4813 CB LEU A 602 6.445 49.876 74.542 1.00 16.62
ATOM 4814 CG LEU A 602 5.913 48.704 73.746 1.00 22.17
ATOM 4815 CD1 LEU A 602 7.103 48.028 73.072 1.00 25.00
ATOM 4816 CD2 LEU A 602 5.239 47.720 74.697 1.00 25.74
ATOM 4817 N VAL A 603 6.401 52.884 75.827 1.00 16.30
ATOM 4818 CA VAL A 603 6.962 53.796 76.815 1.00 14.99
ATOM 4819 C VAL A 603 5.875 54.264 77.771 1.00 19.20
ATOM 4820 O VAL A 603 6.120 54.420 78.958 1.00 21.24
ATOM 4821 CB VAL A 603 7.667 54.947 76.154 1.00 18.27
ATOM 4822 CG1 VAL A 603 8.124 55.941 77.213 1.00 18.14
ATOM 4823 CG2 VAL A 603 8.876 54.419 75.402 1.00 17.65
ATOM 4824 N GLY A 604 4.656 54.452 77.237 1.00 17.40
ATOM 4825 CA GLY A 604 3.518 54.878 78.035 1.00 17.23
ATOM 4826 C GLY A 604 3.190 53.796 79.054 1.00 22.30
ATOM 4827 O GLY A 604 2.836 54.046 80.209 1.00 23.93
ATOM 4828 N LYS A 605 3.294 52.552 78.639 1.00 19.16
ATOM 4829 CA LYS A 605 3.032 51.458 79.565 1.00 22.93
ATOM 4830 C LYS A 605 4.123 51.454 80.596 1.00 23.85
ATOM 4831 O LYS A 605 3.857 51.412 81.765 1.00 29.61
ATOM 4832 CB LYS A 605 2.973 50.084 78.900 1.00 28.91
ATOM 4833 CG LYS A 605 1.739 49.284 79.286 1.00 61.42
ATOM 4834 CD LYS A 605 1.614 47.973 78.520 1.00 86.36
ATOM 4835 CE LYS A 605 0.474 47.077 78.998 1.00100.00
ATOM 4836 NZ LYS A 605 0.926 45.803 79.584 1.00 96.31
ATOM 4837 N ASP A 606 5.360 51.533 80.136 1.00 18.74
ATOM 4838 CA ASP A 606 6.512 51.567 81.020 1.00 16.75
ATOM 4839 C ASP A 606 6.417 52.687 82.021 1.00 21.50
ATOM 4840 O ASP A 606 6.744 52.500 83.171 1.00 23.69
ATOM 4841 CB ASP A 606 7.828 51.737 80.241 1.00 18.62
ATOM 4842 CG ASP A 606 8.194 50.551 79.363 1.00 33.79
ATOM 4843 OD1 ASP A 606 7.867 49.391 79.604 1.00 33.52
ATOM 4844 OD2 ASP A 606 8.916 50.897 78.323 1.00 27.00
ATOM 4845 N LEU A 607 5.964 53.846 81.570 1.00 19.12
ATOM 4846 CA LEU A 607 5.846 55.031 82.403 1.00 21.90
ATOM 4847 C LEU A 607 4.550 55.057 83.169 1.00 28.88
ATOM 4848 O LEU A 607 4.336 55.922 84.027 1.00 26.52
ATOM 4849 CB LEU A 607 5.939 56.303 81.538 1.00 22.98
ATOM 4850 CG LEU A 607 7.314 56.996 81.567 1.00 28.58
ATOM 4851 CD1 LEU A 607 8.412 56.004 81.849 1.00 31.86
ATOM 4852 CD2 LEU A 607 7.582 57.761 80.274 1.00 23.84

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ATOM   4853  N    LYS A 608       3.673  54.121  82.823  1.00 25.73
ATOM   4854  CA   LYS A 608       2.402  54.050  83.483  1.00 27.14
ATOM   4855  C    LYS A 608       1.517  55.274  83.248  1.00 36.18
ATOM   4856  O    LYS A 608       0.808  55.735  84.155  1.00 36.45
ATOM   4857  CB   LYS A 608       2.619  53.872  84.965  1.00 28.04
ATOM   4858  CG   LYS A 608       3.024  52.458  85.321  1.00 34.92
ATOM   4859  CD   LYS A 608       3.455  52.351  86.775  1.00 62.54
ATOM   4860  CE   LYS A 608       4.872  52.865  87.017  1.00100.00
ATOM   4861  NZ   LYS A 608       5.308  52.782  88.423  1.00100.00
ATOM   4862  N    VAL A 609       1.538  55.817  82.037  1.00 33.96
ATOM   4863  CA   VAL A 609       0.700  56.960  81.756  1.00 35.62
ATOM   4864  C    VAL A 609      -0.596  56.539  81.068  1.00 50.35
ATOM   4865  O    VAL A 609      -0.570  55.732  80.140  1.00 50.27
ATOM   4866  CB   VAL A 609       1.399  58.066  81.015  1.00 37.98
ATOM   4867  CG1  VAL A 609       2.835  58.174  81.464  1.00 36.77
ATOM   4868  CG2  VAL A 609       1.344  57.776  79.539  1.00 40.19
ATOM   4869  N    ASP A 610      -1.725  57.084  81.569  1.00 53.33
ATOM   4870  CA   ASP A 610      -3.086  56.822  81.095  1.00 89.47
ATOM   4871  C    ASP A 610      -3.734  55.681  81.880  1.00100.00
ATOM   4872  O    ASP A 610      -4.010  55.789  83.081  1.00 67.46
ATOM   4873  CB   ASP A 610      -3.181  56.608  79.571  1.00 91.20
ATOM   4874  CG   ASP A 610      -3.263  57.902  78.800  1.00 99.31
ATOM   4875  OD1  ASP A 610      -4.214  58.659  78.852  1.00100.00
ATOM   4876  OD2  ASP A 610      -2.208  58.121  78.053  1.00 99.03
ATOM   4877 ZN2+ ZN   Z   1      16.867  38.938  64.588  1.00 19.85
ATOM   4878 YB3+ YB   Y   1      42.592  51.139  99.562  1.00 19.75
ATOM   4879 YB3+ YB   Y   2     -13.987  57.035  52.274  0.50 30.89
ATOM   4880 YB3+ YB   Y   3     -10.598  57.976  52.424  0.50 22.65
ATOM   4881  CG   IMD I   1      25.977  42.326  80.640  1.00 21.27
ATOM   4882  ND1  IMD I   1      25.984  42.381  79.258  1.00 26.76
ATOM   4883  CD2  IMD I   1      27.243  42.000  81.012  1.00 18.44
ATOM   4884  CE1  IMD I   1      27.198  42.109  78.814  1.00 23.26
ATOM   4885  NE2  IMD I   1      27.978  41.865  79.858  1.00 31.16
ATOM   4886  CB   ACE C   1      13.682  11.710  69.377  1.00100.00
ATOM   4887  CG   ACE C   1      12.730  12.944  69.296  1.00100.00
ATOM   4888  OD2  ACE C   1      11.957  12.700  70.111  1.00 28.08
ATOM   4889  OD1  ACE C   1      13.221  14.170  69.327  1.00 29.42
ATOM   4890  C4   HA1 H   1       7.929  39.787  68.124  1.00 33.98
ATOM   4891  C3   HA1 H   1       7.915  38.456  67.710  1.00 34.29
ATOM   4892  C2   HA1 H   1       7.854  37.393  68.601  1.00 27.23
ATOM   4893  C1   HA1 H   1       7.750  37.660  69.963  1.00 31.46
ATOM   4894  C6   HA1 H   1       7.662  38.984  70.398  1.00 31.55
ATOM   4895  C5   HA1 H   1       7.795  40.040  69.485  1.00 28.16
ATOM   4896  C7   HA1 H   1       7.970  40.861  67.070  1.00 38.51
ATOM   4897  O1   HA1 H   1       8.598  41.977  67.467  1.00 34.62
ATOM   4898  C8   HA1 H   1       9.788  42.184  66.789  1.00 34.01
ATOM   4899  C13  HA1 H   1       9.900  43.135  65.770  1.00 31.19
ATOM   4900  C12  HA1 H   1      11.134  43.342  65.144  1.00 27.52
ATOM   4901  C11  HA1 H   1      12.274  42.616  65.518  1.00 32.73
ATOM   4902  C10  HA1 H   1      12.138  41.670  66.533  1.00 33.70
ATOM   4903  C9   HA1 H   1      10.912  41.443  67.158  1.00 34.67
ATOM   4904  C14  HA1 H   1      13.650  42.797  64.863  1.00 37.54
ATOM   4905  C15  HA1 H   1      14.111  41.617  63.980  1.00 44.21
ATOM   4906  N1   HA1 H   1      13.186  41.331  62.884  1.00 47.74
ATOM   4907  C16  HA1 H   1      15.558  41.715  63.487  1.00 45.17
ATOM   4908  N2   HA1 H   1      16.415  41.692  64.674  1.00 44.66
ATOM   4909  O2   HA1 H   1      16.381  40.583  65.539  1.00 40.60
ATOM   4910  C17  HA1 H   1      17.338  42.768  65.058  1.00 37.18
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ATOM   4911  O3  HA1 H   1      17.468  43.810  64.424  1.00 32.19
ATOM   4912  C18 HA1 H   1      18.102  42.561  66.330  1.00 41.82
ATOM   4913  C19 HA1 H   1      17.414  43.354  67.436  1.00 55.81
ATOM   4914  C20 HA1 H   1      18.370  43.767  68.541  1.00 63.54
ATOM   4915  C21 HA1 H   1      17.851  44.929  69.366  1.00 62.49
ATOM   4916  C22 HA1 H   1      17.521  46.129  68.497  1.00 56.55
ATOM   4917  O4  HA1 H   1      16.627  46.104  67.664  1.00 64.73
ATOM   4918  O5  HA1 H   1      18.077  47.221  68.942  1.00 39.37
ATOM   4919  O   HOH W   1      23.566  34.022  75.376  1.00 12.30
ATOM   4920  O   HOH W   2      13.388  27.777  78.688  1.00 13.34
ATOM   4921  O   HOH W   3      25.835  18.549  79.662  1.00 27.10
ATOM   4922  O   HOH W   4      25.597  20.037  56.101  1.00 31.91
ATOM   4923  O   HOH W   5      10.677  54.449  68.009  1.00 18.65
ATOM   4924  O   HOH W   6     -10.132  46.969  60.385  1.00 32.14
ATOM   4925  O   HOH W   7       2.593  37.637  61.650  1.00 21.00
ATOM   4926  O   HOH W   8      -7.181  40.515  62.968  1.00 27.33
ATOM   4927  O   HOH W   9      43.698  44.858  76.466  1.00 45.00
ATOM   4928  O   HOH W  10      15.570  28.918  62.416  1.00 21.48
ATOM   4929  O   HOH W  11      -1.589  36.832  71.268  1.00 30.40
ATOM   4930  O   HOH W  12      -2.055  28.558  60.781  1.00 22.31
ATOM   4931  O   HOH W  13      20.676  44.343  79.098  1.00 32.97
ATOM   4932  O   HOH W  14       3.431  26.421  58.090  1.00 45.38
ATOM   4933  O   HOH W  15      -4.614  50.837  59.260  1.00 25.79
ATOM   4934  O   HOH W  16      36.272  36.591  76.038  1.00 17.59
ATOM   4935  O   HOH W  17      32.654  39.309  77.187  1.00 23.80
ATOM   4936  O   HOH W  18      17.065  55.043  87.500  1.00 25.70
ATOM   4937  O   HOH W  19      40.120  54.721 100.891  1.00 17.97
ATOM   4938  O   HOH W  20      24.948  56.731  93.762  1.00 23.67
ATOM   4939  O   HOH W  21       5.307  31.463  78.439  1.00 25.94
ATOM   4940  O   HOH W  22      29.601  35.642  82.806  1.00 25.64
ATOM   4941  O   HOH W  23      42.458  58.650  95.509  1.00 26.81
ATOM   4942  O   HOH W  24      41.450  41.107  78.272  1.00 24.09
ATOM   4943  O   HOH W  25      22.573  45.711  84.050  1.00 19.66
ATOM   4944  O   HOH W  26       6.739  45.508  66.460  1.00 24.65
ATOM   4945  O   HOH W  27      17.394  39.743  52.082  1.00 23.53
ATOM   4946  O   HOH W  28      24.544  45.460  82.019  1.00 16.68
ATOM   4947  O   HOH W  29      24.772  68.201  81.705  1.00 33.19
ATOM   4948  O   HOH W  30       1.837  33.333  67.260  1.00 21.31
ATOM   4949  O   HOH W  31       4.415  69.786  58.410  1.00 35.00
ATOM   4950  O   HOH W  32       7.455  46.261  57.394  1.00 25.67
ATOM   4951  O   HOH W  33      -9.584  46.880  63.997  1.00 24.93
ATOM   4952  O   HOH W  34      -3.024  25.330  60.767  1.00 42.66
ATOM   4953  O   HOH W  35      17.847  39.318  55.530  1.00 23.09
ATOM   4954  O   HOH W  36      23.296  70.064  87.984  1.00 42.74
ATOM   4955  O   HOH W  37      32.919  53.636  68.454  1.00 26.30
ATOM   4956  O   HOH W  38      29.879  45.644  50.852  1.00 30.86
ATOM   4957  O   HOH W  39      10.807  31.399  52.856  1.00 22.94
ATOM   4958  O   HOH W  40      31.341  28.804  81.757  1.00 27.83
ATOM   4959  O   HOH W  41      19.787  60.946  66.660  1.00 34.61
ATOM   4960  O   HOH W  42       5.475  60.634  63.442  1.00 23.64
ATOM   4961  O   HOH W  43      37.820  49.977  69.049  1.00 34.63
ATOM   4962  O   HOH W  44       8.776  45.288  71.439  1.00 24.05
ATOM   4963  O   HOH W  45      45.482  56.302  77.061  1.00 55.80
ATOM   4964  O   HOH W  46      33.235  31.270  62.597  1.00 31.95
ATOM   4965  O   HOH W  47      -1.953  55.133  57.155  1.00 21.83
ATOM   4966  O   HOH W  48      26.604  54.881  67.253  1.00 20.30
ATOM   4967  O   HOH W  49      14.297  66.865  85.395  1.00 31.63
ATOM   4968  O   HOH W  50       7.263  47.979  65.596  1.00 37.56
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ATOM	4969	O	HOH	W	51	37.920	36.114	73.995	1.00	14.86
ATOM	4970	O	HOH	W	52	28.377	48.590	61.079	1.00	37.27
ATOM	4971	O	HOH	W	53	2.116	28.905	53.079	1.00	42.56
ATOM	4972	O	HOH	W	54	35.521	22.458	64.953	1.00	26.17
ATOM	4973	O	HOH	W	55	7.851	19.910	84.778	1.00	22.04
ATOM	4974	O	HOH	W	56	-14.352	49.917	56.200	1.00	34.62
ATOM	4975	O	HOH	W	57	26.924	39.331	68.855	1.00	24.29
ATOM	4976	O	HOH	W	58	16.076	27.261	80.879	1.00	21.38
ATOM	4977	O	HOH	W	59	29.747	44.590	66.215	1.00	37.34
ATOM	4978	O	HOH	W	60	29.210	23.547	77.093	1.00	31.98
ATOM	4979	O	HOH	W	61	28.910	50.667	63.027	1.00	22.20
ATOM	4980	O	HOH	W	62	20.042	19.974	84.146	1.00	31.02
ATOM	4981	O	HOH	W	63	20.576	35.333	45.069	1.00	26.25
ATOM	4982	O	HOH	W	64	-0.215	29.800	72.342	1.00	33.17
ATOM	4983	O	HOH	W	65	-1.089	45.685	73.734	1.00	33.57
ATOM	4984	O	HOH	W	66	0.438	52.886	76.077	1.00	32.51
ATOM	4985	O	HOH	W	67	14.167	74.815	49.997	1.00	17.05
ATOM	4986	O	HOH	W	68	-4.646	34.746	72.149	1.00	26.96
ATOM	4987	O	HOH	W	69	-0.608	33.321	77.691	1.00	28.42
ATOM	4988	O	HOH	W	70	44.174	49.671	78.015	1.00	44.09
ATOM	4989	O	HOH	W	71	18.342	56.463	89.617	1.00	24.87
ATOM	4990	O	HOH	W	72	-3.402	50.274	64.069	1.00	32.32
ATOM	4991	O	HOH	W	73	35.472	42.694	55.658	1.00	29.12
ATOM	4992	O	HOH	W	74	39.633	49.627	92.786	1.00	23.74
ATOM	4993	O	HOH	W	75	23.814	44.857	73.613	1.00	36.27
ATOM	4994	O	HOH	W	76	4.137	65.690	43.494	1.00	41.73
ATOM	4995	O	HOH	W	77	-2.873	36.499	53.879	1.00	32.19
ATOM	4996	O	HOH	W	78	19.723	36.789	86.029	1.00	23.01
ATOM	4997	O	HOH	W	79	32.756	42.684	86.988	1.00	26.34
ATOM	4998	O	HOH	W	80	-13.494	53.592	58.883	1.00	48.04
ATOM	4999	O	HOH	W	81	10.287	35.426	76.025	1.00	42.73
ATOM	5000	O	HOH	W	82	11.794	38.320	43.226	1.00	38.16
ATOM	5001	O	HOH	W	83	12.911	64.532	53.870	1.00	32.51
ATOM	5002	O	HOH	W	84	23.737	48.333	68.074	1.00	20.34
ATOM	5003	O	HOH	W	85	10.259	47.114	58.559	1.00	25.59
ATOM	5004	O	HOH	W	86	10.648	53.408	86.123	1.00	28.02
ATOM	5005	O	HOH	W	87	6.095	34.678	88.868	1.00	27.11
ATOM	5006	O	HOH	W	88	10.406	35.822	89.126	1.00	37.02
ATOM	5007	O	HOH	W	89	45.214	48.270	89.083	1.00	41.53
ATOM	5008	O	HOH	W	90	1.875	28.252	68.827	1.00	32.79
ATOM	5009	O	HOH	W	91	20.183	28.258	51.122	1.00	37.70
ATOM	5010	O	HOH	W	92	39.933	60.917	79.130	1.00	29.50
ATOM	5011	O	HOH	W	93	10.589	68.582	87.108	1.00	33.37
ATOM	5012	O	HOH	W	94	20.727	42.599	67.261	1.00	63.87
ATOM	5013	O	HOH	W	95	33.765	20.334	64.966	1.00	28.59
ATOM	5014	O	HOH	W	96	34.389	28.802	64.440	1.00	31.49
ATOM	5015	O	HOH	W	97	27.802	25.534	57.889	1.00	35.42
ATOM	5016	O	HOH	W	98	6.604	51.604	61.117	1.00	22.24
ATOM	5017	O	HOH	W	99	35.194	48.072	98.344	1.00	43.21
ATOM	5018	O	HOH	W	100	44.877	53.167	86.540	1.00	32.11
ATOM	5019	O	HOH	W	101	6.655	71.717	84.957	1.00	49.55
ATOM	5020	O	HOH	W	102	21.563	48.098	86.750	1.00	25.99
ATOM	5021	O	HOH	W	103	3.651	42.638	66.989	1.00	20.94
ATOM	5022	O	HOH	W	104	9.258	28.493	88.481	1.00	24.87
ATOM	5023	O	HOH	W	105	1.984	35.090	56.227	1.00	25.06
ATOM	5024	O	HOH	W	106	22.599	62.536	74.820	1.00	21.67
ATOM	5025	O	HOH	W	107	8.606	44.166	75.301	1.00	27.58
ATOM	5026	O	HOH	W	108	27.757	40.396	73.057	1.00	36.06

ATOM	5027	O	HOH W 109	37.414	53.648	66.810	1.00	62.05
ATOM	5028	O	HOH W 110	-9.983	46.517	74.286	1.00	52.15
ATOM	5029	O	HOH W 111	28.275	66.451	78.187	1.00	20.97
ATOM	5030	O	HOH W 112	0.299	38.957	40.503	1.00	50.56
ATOM	5031	O	HOH W 113	5.444	44.057	39.458	1.00	52.33
ATOM	5032	O	HOH W 114	30.644	32.062	49.915	1.00	36.21
ATOM	5033	O	HOH W 115	18.252	26.342	50.525	1.00	45.23
ATOM	5034	O	HOH W 116	13.526	15.084	61.080	1.00	37.70
ATOM	5035	O	HOH W 117	-13.979	18.969	42.299	1.00	56.22
ATOM	5036	O	HOH W 118	26.776	25.413	84.339	1.00	35.73
ATOM	5037	O	HOH W 119	11.930	58.269	71.061	1.00	23.92
ATOM	5038	O	HOH W 120	34.912	67.869	86.385	1.00	24.32
ATOM	5039	O	HOH W 121	24.502	71.580	83.464	1.00	30.05
ATOM	5040	O	HOH W 122	25.720	67.144	90.575	1.00	33.20
ATOM	5041	O	HOH W 123	27.913	32.926	85.600	1.00	40.23
ATOM	5042	O	HOH W 124	34.782	68.339	71.280	1.00	36.93
ATOM	5043	O	HOH W 125	15.535	41.733	77.570	1.00	43.41
ATOM	5044	O	HOH W 126	39.295	44.865	92.155	1.00	38.08
ATOM	5045	O	HOH W 127	34.644	38.435	88.608	1.00	43.36
ATOM	5046	O	HOH W 128	16.902	68.175	82.059	1.00	33.39
ATOM	5047	O	HOH W 129	23.092	69.396	79.614	1.00	43.52
ATOM	5048	O	HOH W 130	38.423	66.837	74.075	1.00	44.21
ATOM	5049	O	HOH W 131	20.725	15.554	56.723	1.00	58.73
ATOM	5050	O	HOH W 132	10.791	73.362	50.162	1.00	53.71
ATOM	5051	O	HOH W 133	34.794	62.523	92.372	1.00	44.50
ATOM	5052	O	HOH W 134	44.478	50.279	84.427	1.00	43.68
ATOM	5053	O	HOH W 135	34.311	29.805	80.713	1.00	45.96
ATOM	5054	O	HOH W 136	40.841	39.740	89.975	1.00	60.88
ATOM	5055	O	HOH W 137	25.356	40.542	42.066	1.00	41.02
ATOM	5056	O	HOH W 138	28.438	44.085	75.926	1.00	41.72
ATOM	5057	O	HOH W 139	25.711	38.832	88.780	1.00	65.21
ATOM	5058	O	HOH W 140	11.923	76.777	49.321	1.00	58.57
ATOM	5059	O	HOH W 141	24.266	34.539	87.344	1.00	50.29
ATOM	5060	O	HOH W 142	16.030	9.532	72.041	1.00	48.71
ATOM	5061	O	HOH W 143	-3.177	67.341	56.141	1.00	42.73
ATOM	5062	O	HOH W 144	50.825	56.903	100.142	1.00	59.75
ATOM	5063	O	HOH W 145	0.820	71.358	71.084	1.00	40.87
ATOM	5064	O	HOH W 146	-17.608	36.729	42.417	1.00	45.50
ATOM	5065	O	HOH W 147	28.308	19.679	78.841	1.00	36.05
ATOM	5066	O	HOH W 148	2.463	58.104	67.862	1.00	44.11
ATOM	5067	O	HOH W 149	10.592	23.631	48.575	1.00	63.18
ATOM	5068	O	HOH W 150	6.654	22.341	57.393	1.00	46.55
ATOM	5069	O	HOH W 151	-2.964	30.104	61.638	1.00	51.03
ATOM	5070	O	HOH W 152	9.679	66.053	66.461	1.00	67.73
ATOM	5071	O	HOH W 153	9.376	26.793	46.927	1.00	53.94
ATOM	5072	O	HOH W 154	28.743	57.505	48.125	1.00	49.99
ATOM	5073	O	HOH W 155	13.766	52.942	39.760	1.00	47.92
ATOM	5074	O	HOH W 156	12.406	65.783	93.413	1.00	53.53
ATOM	5075	O	HOH W 157	0.180	56.418	64.866	1.00	57.49
ATOM	5076	O	HOH W 158	23.495	20.294	54.004	1.00	45.54
ATOM	5077	O	HOH W 159	38.423	52.807	71.922	1.00	54.48
ATOM	5078	O	HOH W 160	25.613	66.532	74.583	1.00	55.93
ATOM	5079	O	HOH W 161	10.187	71.181	49.801	1.00	54.22
ATOM	5080	O	HOH W 162	38.339	46.321	99.093	1.00	60.74
ATOM	5081	O	HOH W 163	15.552	55.295	41.947	1.00	49.87
ATOM	5082	O	HOH W 164	8.318	42.904	84.121	1.00	58.23
ATOM	5083	O	HOH W 165	11.599	17.563	84.450	1.00	49.23
ATOM	5084	O	HOH W 166	43.868	48.771	91.573	1.00	46.30

ATOM	5085	O	HOH W 167	-7.109	31.913	64.267	1.00	60.17
ATOM	5086	O	HOH W 168	13.620	57.052	40.950	1.00	50.59
ATOM	5087	O	HOH W 169	24.100	13.750	57.699	1.00	57.30
ATOM	5088	O	HOH W 170	-1.060	50.178	39.555	1.00	53.44
ATOM	5089	O	HOH W 171	28.136	38.840	82.951	1.00	65.23
ATOM	5090	O	HOH W 172	33.383	46.065	62.179	1.00	54.17
ATOM	5091	O	HOH W 173	32.676	64.388	94.464	1.00	63.25
ATOM	5092	O	HOH W 174	28.895	34.922	43.046	1.00	65.00
ATOM	5093	O	HOH W 175	1.150	50.642	82.686	1.00	50.19
ATOM	5094	O	HOH W 176	38.269	37.461	84.426	1.00	55.97
ATOM	5095	O	HOH W 177	28.133	15.115	62.115	1.00	54.46
ATOM	5096	O	HOH W 178	-21.180	27.797	43.644	1.00	41.51
ATOM	5097	O	HOH W 179	37.216	39.040	89.229	1.00	51.67
ATOM	5098	O	HOH W 180	-16.439	50.762	42.943	1.00	52.31
ATOM	5099	O	HOH W 181	27.532	70.756	92.817	1.00	51.38
ATOM	5100	O	HOH W 182	17.249	54.147	94.044	1.00	60.50
ATOM	5101	O	HOH W 183	30.255	42.249	74.632	1.00	59.08
ATOM	5102	O	HOH W 184	7.869	71.095	47.756	1.00	47.99
ATOM	5103	O	HOH W 185	-3.927	35.976	39.455	1.00	54.08
ATOM	5104	O	HOH W 186	17.648	48.041	85.644	1.00	48.63
ATOM	5105	O	HOH W 187	16.843	63.121	61.640	1.00	55.70
ATOM	5106	O	HOH W 188	32.678	67.498	91.570	1.00	46.01
ATOM	5107	O	HOH W 189	26.777	67.291	92.968	1.00	62.50
ATOM	5108	O	HOH W 190	43.626	47.465	93.713	1.00	48.48
ATOM	5109	O	HOH W 191	19.866	63.522	93.923	1.00	49.85
ATOM	5110	O	HOH W 192	31.772	43.653	64.750	1.00	61.07
ATOM	5111	O	HOH W 193	15.157	75.463	53.328	1.00	32.84
ATOM	5112	O	HOH W 194	34.792	45.584	97.991	1.00	58.67
ATOM	5113	O	HOH W 195	37.064	21.576	67.060	1.00	54.68
ATOM	5114	O	HOH W 196	30.070	14.758	70.646	1.00	51.43
ATOM	5115	O	HOH W 197	28.860	72.257	75.634	1.00	62.52
ATOM	5116	O	HOH W 198	8.471	19.419	57.691	1.00	57.63
ATOM	5117	O	HOH W 199	0.503	41.546	78.765	1.00	56.21
ATOM	5118	O	HOH W 200	50.521	54.089	79.412	1.00	51.01
ATOM	5119	O	HOH W 201	-0.543	52.686	81.009	1.00	46.93
ATOM	5120	O	HOH W 202	26.682	58.450	96.254	1.00	50.09
ATOM	5121	O	HOH W 203	17.549	42.811	71.646	1.00	57.91
ATOM	5122	O	HOH W 204	29.750	18.123	58.438	1.00	66.60
ATOM	5123	O	HOH W 205	22.570	40.343	42.345	1.00	59.88
ATOM	5124	O	HOH W 206	-13.013	21.974	59.037	1.00	67.74
ATOM	5125	O	HOH W 207	1.213	62.922	83.165	1.00	62.70
ATOM	5126	O	HOH W 208	3.178	70.030	60.833	1.00	48.41
ATOM	5127	O	HOH W 209	35.803	16.258	65.017	1.00	58.97
ATOM	5128	O	HOH W 210	46.693	53.513	105.644	1.00	53.44
ATOM	5129	O	HOH W 211	4.942	70.389	45.132	1.00	53.10
ATOM	5130	O	HOH W 212	37.457	25.190	67.060	1.00	63.53
ATOM	5131	O	HOH W 213	11.196	29.803	45.434	1.00	53.63
ATOM	5132	O	HOH W 214	26.923	61.460	54.700	1.00	69.19
ATOM	5133	O	HOH W 215	0.546	69.044	72.439	1.00	39.60
ATOM	5134	O	HOH W 216	-23.701	40.796	47.831	1.00	52.83
ATOM	5135	O	HOH W 217	12.204	39.839	90.814	1.00	47.33
ATOM	5136	O	HOH W 218	33.128	42.150	94.157	1.00	56.23
ATOM	5137	O	HOH W 219	49.923	57.382	98.346	1.00	58.39
ATOM	5138	O	HOH W 220	32.977	13.997	66.958	1.00	60.97
ATOM	5139	O	HOH W 221	20.874	69.427	54.701	1.00	55.56
ATOM	5140	O	HOH W 223	-19.866	36.630	55.598	1.00	56.17
ATOM	5141	O	HOH W 224	38.826	44.981	56.301	1.00	57.17
ATOM	5142	O	HOH W 225	18.003	44.053	79.512	1.00	56.10

ATOM	5143	O	HOH W 226	6.358	21.380	58.894	1.00	66.63
ATOM	5144	O	HOH W 227	29.345	15.953	82.008	1.00	60.35
ATOM	5145	O	HOH W 228	-18.860	45.061	58.589	1.00	60.74
ATOM	5146	O	HOH W 229	-17.851	43.055	49.022	1.00	52.29
ATOM	5147	O	HOH W 230	-0.184	59.399	61.998	1.00	45.48
ATOM	5148	O	HOH W 231	16.645	54.043	90.579	1.00	63.17
ATOM	5149	O	HOH W 232	7.766	63.225	91.375	1.00	63.27
ATOM	5150	O	HOH W 233	26.321	54.492	43.345	1.00	53.24
ATOM	5151	O	HOH W 234	25.867	54.044	96.258	1.00	59.57
ATOM	5152	O	HOH W 235	23.499	50.875	40.953	1.00	68.74
ATOM	5153	O	HOH W 236	-5.445	53.893	45.137	1.00	54.78
ATOM	5154	O	HOH W 237	17.844	70.747	82.442	1.00	63.13
ATOM	5155	O	HOH W 238	20.474	17.609	84.838	1.00	57.33
ATOM	5156	O	HOH W 239	25.472	69.148	91.574	1.00	49.69
ATOM	5157	O	HOH W 240	26.931	38.921	43.687	1.00	43.43
ATOM	5158	O	HOH W 241	41.146	39.236	69.351	1.00	51.35
ATOM	5159	O	HOH W 242	-15.188	39.591	69.499	1.00	52.14
ATOM	5160	O	HOH W 243	38.020	68.348	72.041	1.00	63.17
ATOM	5161	O	HOH W 244	37.090	47.070	57.295	1.00	67.21
ATOM	5162	O	HOH W 245	14.523	42.814	79.612	1.00	50.83
ATOM	5163	O	HOH W 246	21.479	71.752	81.603	1.00	57.85
ATOM	5164	O	HOH W 247	3.569	32.515	42.599	1.00	63.63
ATOM	5165	O	HOH W 248	15.427	30.206	95.160	1.00	66.30
ATOM	5166	O	HOH W 249	17.547	60.509	94.759	1.00	68.80
ATOM	5167	O	HOH W 250	-20.576	43.652	41.549	1.00	58.89
ATOM	5168	O	HOH W 251	26.697	43.654	74.283	1.00	50.83
ATOM	5169	O	HOH W 252	0.000	75.309	76.429	1.00	53.17
ATOM	5170	O	HOH W 253	-6.860	59.055	50.820	1.00	52.72
ATOM	5171	O	HOH W 254	19.908	76.292	86.992	1.00	57.00
ATOM	5172	O	HOH W 255	15.432	77.576	52.312	1.00	58.58
ATOM	5173	O	HOH W 256	-1.312	22.878	57.690	1.00	56.89
ATOM	5174	O	HOH W 257	23.302	46.362	42.752	1.00	58.41
ATOM	5175	O	HOH W 258	-3.935	18.515	44.302	1.00	66.77
ATOM	5176	O	HOH W 259	-0.906	44.854	67.260	1.00	67.33
ATOM	5177	O	HOH W 260	40.522	44.781	83.968	1.00	59.16
ATOM	5178	O	HOH W 261	37.813	59.910	97.629	1.00	57.01
ATOM	5179	O	HOH W 262	32.677	55.701	51.474	1.00	60.55
ATOM	5180	O	HOH W 263	-6.595	33.217	67.706	1.00	51.41
ATOM	5181	O	HOH W 264	-11.801	39.738	40.656	1.00	59.31
ATOM	5182	O	HOH W 265	36.812	27.197	69.252	1.00	57.45
ATOM	5183	O	HOH W 266	34.193	52.692	52.115	1.00	59.13
ATOM	5184	O	HOH W 267	12.588	76.023	54.027	1.00	63.98
ATOM	5185	O	HOH W 268	10.674	37.861	73.233	1.00	40.60
ATOM	5186	O	HOH W 269	33.884	20.777	73.836	1.00	67.25
ATOM	5187	O	HOH W 270	6.835	55.397	86.991	1.00	50.57
ATOM	5188	O	HOH W 271	23.599	60.716	61.680	1.00	53.57
ATOM	5189	O	HOH W 272	2.922	38.598	91.369	1.00	53.23
ATOM	5190	O	HOH W 273	-14.019	47.068	63.315	1.00	61.45
ATOM	5191	O	HOH W 274	35.210	48.114	63.698	1.00	53.89
ATOM	5192	O	HOH W 275	16.488	49.524	92.566	1.00	65.29
ATOM	5193	O	HOH W 276	28.142	48.070	93.565	1.00	56.02
ATOM	5194	O	HOH W 277	48.590	54.855	93.165	1.00	52.88
ATOM	5195	O	HOH W 278	-7.560	52.681	66.663	1.00	65.32
ATOM	5196	O	HOH W 279	26.921	40.342	92.369	1.00	61.89
ATOM	5197	O	HOH W 280	10.593	19.572	55.307	1.00	57.94
ATOM	5198	O	HOH W 281	-20.116	25.353	54.224	1.00	65.34
ATOM	5199	O	HOH W 283	5.753	34.772	40.653	1.00	65.19
ATOM	5200	O	HOH W 284	37.089	40.886	51.834	1.00	60.43

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ATOM	5201	O	HOH W 285	2.735	42.995	80.539	1.00	57.86
ATOM	5202	O	HOH W 287	19.059	69.848	56.498	1.00	56.48
ATOM	5203	O	HOH W 288	36.914	56.699	72.243	1.00	58.00
ATOM	5204	O	HOH W 289	35.097	38.832	50.525	1.00	54.28
ATOM	5205	O	HOH W 290	33.943	40.245	49.022	1.00	68.42
ATOM	5206	O	HOH W 291	6.152	36.850	91.179	1.00	29.34
ATOM	5207	O	HOH W 292	1.210	46.408	69.753	1.00	38.48
ATOM	5208	O	HOH W 293	36.663	66.406	83.027	1.00	33.89
ATOM	5209	O	HOH W 294	25.382	33.180	85.450	1.00	30.72
ATOM	5210	O	HOH W 295	48.306	49.133	87.418	1.00	40.22
ATOM	5211	O	HOH W 296	14.557	46.216	72.037	1.00	30.76
ATOM	5212	O	HOH W 297	44.301	51.910	93.764	1.00	39.05
ATOM	5213	O	HOH W 298	18.556	45.259	82.564	1.00	36.72
ATOM	5214	O	HOH W 299	9.986	28.598	45.588	1.00	39.34
ATOM	5215	O	HOH W 300	13.993	19.347	83.731	1.00	37.90
ATOM	5216	O	HOH W 301	9.259	17.561	61.577	1.00	41.15
ATOM	5217	O	HOH W 302	16.844	18.360	52.308	1.00	46.61
ATOM	5218	O	HOH W 303	38.428	39.782	90.580	1.00	44.37
ATOM	5219	O	HOH W 304	32.776	39.838	87.332	1.00	44.21
ATOM	5220	O	HOH W 305	22.789	57.732	68.755	1.00	51.68
ATOM	5221	O	HOH W 306	44.043	48.212	96.482	1.00	37.36
ATOM	5222	O	HOH W 307	21.279	43.654	74.635	1.00	49.72
ATOM	5223	O	HOH W 308	38.221	36.657	87.583	1.00	38.29
ATOM	5224	O	HOH W 309	21.723	73.282	87.385	1.00	34.04
ATOM	5225	O	HOH W 310	8.168	76.237	56.157	1.00	39.31
ATOM	5226	O	HOH W 311	-2.729	38.458	40.852	1.00	41.02
ATOM	5227	O	HOH W 312	20.996	69.427	84.795	1.00	45.18
ATOM	5228	O	HOH W 313	35.296	17.312	67.460	1.00	38.26
ATOM	5229	O	HOH W 314	24.302	29.892	85.644	1.00	49.45
ATOM	5230	O	HOH W 315	4.052	59.432	64.567	1.00	34.47
ATOM	5231	O	HOH W 316	14.725	36.807	89.553	1.00	33.91
ATOM	5232	O	HOH W 317	7.686	31.868	42.750	1.00	40.32
ATOM	5233	O	HOH W 318	39.969	51.055	103.431	1.00	41.02
ATOM	5234	O	HOH W 319	18.713	58.281	59.231	1.00	43.03
ATOM	5235	O	HOH W 320	21.582	25.291	53.208	1.00	44.80
ATOM	5236	O	HOH W 321	17.652	14.233	77.724	1.00	45.13
ATOM	5237	O	HOH W 322	22.090	36.433	86.993	1.00	42.48
ATOM	5238	O	HOH W 323	26.563	15.758	79.414	1.00	56.46
ATOM	5239	O	HOH W 324	21.935	20.097	82.429	1.00	35.42
ATOM	5240	O	HOH W 325	25.721	69.631	83.521	1.00	42.41
ATOM	5241	O	HOH W 326	-5.448	20.604	56.597	1.00	38.44
ATOM	5242	O	HOH W 327	15.730	48.094	46.732	1.00	48.34
ATOM	5243	O	HOH W 328	12.908	46.398	73.762	1.00	34.69
ATOM	5244	O	HOH W 329	18.153	15.593	82.086	1.00	51.74
ATOM	5245	O	HOH W 330	19.662	67.341	59.127	1.00	39.97
ATOM	5246	O	HOH W 331	26.523	11.736	64.469	1.00	52.53
ATOM	5247	O	HOH W 332	22.187	41.399	86.094	1.00	40.32
ATOM	5248	O	HOH W 333	10.740	62.699	65.206	1.00	43.24
ATOM	5249	O	HOH W 334	41.105	34.539	67.496	1.00	45.74
ATOM	5250	O	HOH W 335	-7.261	21.078	43.044	1.00	43.21
ATOM	5251	O	HOH W 336	21.378	39.371	70.588	1.00	40.11
ATOM	5252	O	HOH W 337	34.068	54.868	70.503	1.00	40.92
ATOM	5253	O	HOH W 338	36.807	53.592	71.204	1.00	42.71
ATOM	5254	O	HOH W 339	35.802	60.257	72.242	1.00	55.10
ATOM	5255	O	HOH W 340	26.326	16.958	57.093	1.00	51.55
ATOM	5256	O	HOH W 341	-4.105	44.588	43.247	1.00	34.17
ATOM	5257	O	HOH W 342	3.059	70.581	75.133	1.00	44.28
ATOM	5258	O	HOH W 343	16.235	45.375	43.944	1.00	42.52

ATOM	5259	O	HOH W 344	16.842	68.765	79.662	1.00	36.62
ATOM	5260	O	HOH W 345	31.764	31.143	83.301	1.00	39.76
ATOM	5261	O	HOH W 346	-21.720	43.895	50.038	1.00	56.98
ATOM	5262	O	HOH W 347	17.485	62.993	50.436	1.00	35.10
ATOM	5263	O	HOH W 348	39.499	40.948	88.883	1.00	33.45
ATOM	5264	O	HOH W 349	11.734	28.705	89.825	1.00	45.56
ATOM	5265	O	HOH W 350	20.754	54.796	95.357	1.00	37.52
ATOM	5266	O	HOH W 351	4.838	65.330	69.568	1.00	33.41
ATOM	5267	O	HOH W 352	33.883	66.237	72.688	1.00	33.83
ATOM	5268	O	HOH W 353	16.037	63.226	65.963	1.00	50.85
ATOM	5269	O	HOH W 354	1.209	32.211	69.349	1.00	45.93
ATOM	5270	O	HOH W 355	25.516	49.158	94.608	1.00	47.62
ATOM	5271	O	HOH W 356	34.387	23.584	75.231	1.00	41.51
ATOM	5272	O	HOH W 357	15.835	59.854	57.321	1.00	32.92
ATOM	5273	O	HOH W 358	30.989	22.782	58.631	1.00	48.50
ATOM	5274	O	HOH W 359	-0.131	41.666	76.726	1.00	37.81
ATOM	5275	O	HOH W 360	30.317	39.711	83.800	1.00	58.87
ATOM	5276	O	HOH W 361	22.930	24.158	51.286	1.00	40.78
ATOM	5277	O	HOH W 362	30.355	42.190	67.705	1.00	40.91
ATOM	5278	O	HOH W 363	22.695	46.247	90.678	1.00	33.83
ATOM	5279	O	HOH W 364	-20.095	25.789	45.499	1.00	46.00
ATOM	5280	O	HOH W 365	37.366	40.766	55.105	1.00	50.47
ATOM	5281	O	HOH W 366	31.614	19.770	76.528	1.00	46.77
ATOM	5282	O	HOH W 367	28.619	21.148	76.426	1.00	45.17
ATOM	5283	O	HOH W 368	20.788	46.785	81.907	1.00	40.07
ATOM	5284	O	HOH W 369	19.067	59.674	60.682	1.00	52.39
ATOM	5285	O	HOH W 370	17.251	57.498	44.041	1.00	42.11
ATOM	5286	O	HOH W 371	22.814	55.956	95.276	1.00	38.36
ATOM	5287	O	HOH W 372	11.797	60.063	42.321	1.00	41.37
ATOM	5288	O	HOH W 373	4.192	63.375	62.773	1.00	41.59
ATOM	5289	O	HOH W 374	-15.434	22.581	44.545	1.00	61.31
ATOM	5290	O	HOH W 375	39.636	37.500	68.055	1.00	34.01
ATOM	5291	O	HOH W 376	22.288	40.161	68.751	1.00	47.41
ATOM	5292	O	HOH W 377	-14.370	39.668	66.900	1.00	45.13
ATOM	5293	O	HOH W 378	29.957	64.249	94.360	1.00	53.97
ATOM	5294	O	HOH W 379	16.644	14.303	57.098	1.00	53.71
ATOM	5295	O	HOH W 380	28.540	69.064	76.673	1.00	48.14
ATOM	5296	O	HOH W 381	5.575	48.072	80.755	1.00	41.30
ATOM	5297	O	HOH W 382	-3.209	37.330	44.030	1.00	38.14
ATOM	5298	O	HOH W 383	10.772	71.014	58.445	1.00	52.05
ATOM	5299	O	HOH W 384	20.473	46.333	77.273	1.00	44.37
ATOM	5300	O	HOH W 385	25.473	45.291	93.863	1.00	39.80
ATOM	5301	O	HOH W 386	16.812	61.299	59.570	1.00	34.64
ATOM	5302	O	HOH W 387	37.014	51.364	61.433	1.00	56.70
ATOM	5303	O	HOH W 388	12.204	59.709	63.330	1.00	41.06
ATOM	5304	O	HOH W 389	24.023	66.534	52.905	1.00	55.32
ATOM	5305	O	HOH W 390	0.506	54.311	70.323	1.00	38.98
ATOM	5306	O	HOH W 391	11.949	16.758	53.986	1.00	53.18
ATOM	5307	O	HOH W 392	37.416	54.792	101.784	1.00	38.65
ATOM	5308	O	HOH W 393	46.378	52.835	83.600	1.00	50.43
ATOM	5309	O	HOH W 394	24.103	26.795	86.273	1.00	49.03
ATOM	5310	O	HOH W 395	27.075	52.383	96.106	1.00	57.28
ATOM	5311	O	HOH W 396	36.006	34.016	54.586	1.00	44.84
ATOM	5312	O	HOH W 397	38.523	29.031	71.925	1.00	33.93
ATOM	5313	O	HOH W 398	12.523	44.136	75.273	1.00	53.61
ATOM	5314	O	HOH W 399	15.735	61.114	45.742	1.00	44.69
ATOM	5315	O	HOH W 400	20.754	35.092	42.445	1.00	51.37
ATOM	5316	O	HOH W 401	14.222	23.180	85.491	1.00	35.20

ATOM	5317	O	HOH W 402	-20.951	42.853	52.762	1.00	39.02
ATOM	5318	O	HOH W 403	6.053	28.199	51.239	1.00	65.04
ATOM	5319	O	HOH W 404	35.313	44.557	54.005	1.00	50.04
ATOM	5320	O	HOH W 405	-18.153	20.676	43.582	1.00	43.52
ATOM	5321	O	HOH W 406	28.895	14.049	64.120	1.00	43.99
ATOM	5322	O	HOH W 407	21.077	65.132	59.088	1.00	45.25
ATOM	5323	O	HOH W 408	25.918	65.162	56.853	1.00	55.28
ATOM	5324	O	HOH W 409	2.421	65.212	63.670	1.00	61.93
ATOM	5325	O	HOH W 410	-0.547	35.743	54.699	1.00	46.69
ATOM	5326	O	HOH W 411	-22.289	27.518	46.814	1.00	47.50
ATOM	5327	O	HOH W 412	24.607	7.260	70.646	1.00	36.92
ATOM	5328	O	HOH W 413	34.593	44.376	64.986	1.00	49.97
ATOM	5329	O	HOH W 414	34.413	34.797	52.195	1.00	48.85
ATOM	5330	O	HOH W 415	-4.740	52.565	44.026	1.00	44.22
ATOM	5331	O	HOH W 416	19.232	52.944	93.963	1.00	39.51
ATOM	5332	O	HOH W 417	27.621	46.196	69.991	1.00	42.91
ATOM	5333	O	HOH W 418	3.480	62.682	56.725	1.00	40.03
ATOM	5334	O	HOH W 419	1.599	67.083	71.072	1.00	36.73
ATOM	5335	O	HOH W 420	24.962	34.424	45.256	1.00	53.29
ATOM	5336	O	HOH W 421	16.185	47.345	82.105	1.00	47.82
ATOM	5337	O	HOH W 422	16.038	41.047	91.569	1.00	65.77
ATOM	5338	O	HOH W 423	29.831	56.603	59.633	1.00	57.12
ATOM	5339	O	HOH W 424	23.000	40.491	73.243	1.00	46.62
ATOM	5340	O	HOH W 425	36.125	35.327	85.790	1.00	44.47
ATOM	5341	O	HOH W 426	3.089	58.590	85.674	1.00	48.29
ATOM	5342	O	HOH W 427	-0.907	70.074	48.963	1.00	43.00
ATOM	5343	O	HOH W 428	-11.044	52.085	60.685	1.00	56.36
ATOM	5344	O	HOH W 429	23.496	7.025	68.752	1.00	43.76
ATOM	5345	O	HOH W 430	-5.598	43.223	41.100	1.00	45.62
ATOM	5346	O	HOH W 431	20.167	50.377	89.978	1.00	59.50
ATOM	5347	O	HOH W 432	-20.425	23.096	45.440	1.00	44.34
ATOM	5348	O	HOH W 433	9.260	76.289	58.173	1.00	45.95
ATOM	5349	O	HOH W 434	-11.917	29.670	59.131	1.00	43.37
ATOM	5350	O	HOH W 435	33.178	32.939	82.506	1.00	45.21
ATOM	5351	O	HOH W 436	12.256	17.158	87.387	1.00	52.47
ATOM	5352	O	HOH W 437	13.785	47.874	75.233	1.00	42.67
ATOM	5353	O	HOH W 438	23.499	28.449	84.993	1.00	49.95
ATOM	5354	O	HOH W 439	32.378	58.281	58.965	1.00	38.63
ATOM	5355	O	HOH W 440	16.415	52.385	87.735	1.00	45.19
ATOM	5356	O	HOH W 441	-4.177	56.799	49.770	1.00	38.37
ATOM	5357	O	HOH W 442	43.834	51.522	97.318	1.00	15.87
ATOM	5358	O	HOH W 443	40.609	50.537	98.000	1.00	13.87
ATOM	5359	O	HOH W 444	26.131	32.974	75.528	1.00	17.75
ATOM	5360	O	HOH W 445	7.172	22.314	69.284	1.00	19.18
ATOM	5361	O	HOH W 446	36.875	66.145	79.032	1.00	15.68
ATOM	5362	O	HOH W 447	12.570	36.470	59.739	1.00	22.25
ATOM	5363	O	HOH W 448	3.629	36.729	59.008	1.00	24.63
ATOM	5364	O	HOH W 449	13.223	30.168	61.997	1.00	21.63
ATOM	5365	O	HOH W 450	42.538	52.950	90.812	1.00	21.87
ATOM	5366	O	HOH W 451	40.673	52.006	101.288	1.00	21.07
ATOM	5367	O	HOH W 452	15.152	48.019	69.852	1.00	20.74
ATOM	5368	O	HOH W 453	11.735	62.018	52.859	1.00	25.04
ATOM	5369	O	HOH W 454	17.367	41.418	54.225	1.00	26.89
ATOM	5370	O	HOH W 455	28.048	31.054	67.049	1.00	20.41
ATOM	5371	O	HOH W 456	2.679	41.086	60.234	1.00	22.58
ATOM	5372	O	HOH W 457	5.044	48.874	63.550	1.00	24.48
ATOM	5373	O	HOH W 458	19.970	48.260	84.436	1.00	19.72
ATOM	5374	O	HOH W 459	24.119	64.991	90.851	1.00	27.81

ATOM	5375	O	HOH W 460	27.735	64.900	76.010	1.00	22.50
ATOM	5376	O	HOH W 461	35.183	67.097	77.274	1.00	20.47
ATOM	5377	O	HOH W 462	40.016	67.442	82.803	1.00	30.25
ATOM	5378	O	HOH W 463	21.431	20.406	79.512	1.00	19.80
ATOM	5379	O	HOH W 464	9.801	21.726	85.048	1.00	31.87
ATOM	5380	O	HOH W 465	12.099	51.319	43.678	1.00	32.13
ATOM	5381	O	HOH W 466	21.479	47.570	79.573	1.00	20.70
ATOM	5382	O	HOH W 467	30.644	44.679	73.638	1.00	31.20
ATOM	5383	O	HOH W 468	12.649	37.474	63.305	1.00	20.96
ATOM	5384	O	HOH W 469	17.679	67.340	77.339	1.00	31.69
ATOM	5385	O	HOH W 470	42.001	40.231	84.180	1.00	25.43
ATOM	5386	O	HOH W 471	5.346	25.312	56.052	1.00	27.05
ATOM	5387	O	HOH W 472	24.008	46.111	79.563	1.00	24.38
ATOM	5388	O	HOH W 473	11.126	59.092	68.572	1.00	33.24
ATOM	5389	O	HOH W 474	10.233	25.426	87.360	1.00	27.17
ATOM	5390	O	HOH W 475	10.149	53.345	78.704	1.00	29.56
ATOM	5391	O	HOH W 476	1.207	43.652	68.278	1.00	26.00
ATOM	5392	O	HOH W 477	12.018	17.344	61.729	1.00	27.50
ATOM	5393	O	HOH W 478	39.964	44.018	89.513	1.00	25.69
ATOM	5394	O	HOH W 479	31.106	68.340	81.212	1.00	20.95
ATOM	5395	O	HOH W 480	9.540	56.742	68.398	1.00	22.40
ATOM	5396	O	HOH W 481	40.376	40.423	86.930	1.00	24.01
ATOM	5397	O	HOH W 482	10.453	46.869	72.971	1.00	28.43
ATOM	5398	O	HOH W 483	35.835	66.005	74.702	1.00	22.47
ATOM	5399	O	HOH W 484	16.339	37.719	53.138	1.00	23.36
ATOM	5400	O	HOH W 485	11.797	65.996	87.056	1.00	30.00
ATOM	5401	O	HOH W 486	39.524	48.351	97.744	1.00	22.26
ATOM	5402	O	HOH W 487	34.942	31.976	64.492	1.00	32.27
ATOM	5403	O	HOH W 488	1.032	27.223	55.074	1.00	23.57
ATOM	5404	O	HOH W 489	10.893	73.559	54.865	1.00	28.01
ATOM	5405	O	HOH W 490	16.301	57.229	55.525	1.00	30.08
ATOM	5406	O	HOH W 491	2.296	64.458	72.194	1.00	27.27
ATOM	5407	O	HOH W 492	11.932	33.117	74.427	1.00	33.09
ATOM	5408	O	HOH W 493	26.709	61.818	82.089	1.00	25.83
ATOM	5409	O	HOH W 494	17.635	31.832	86.739	1.00	29.42
ATOM	5410	O	HOH W 495	30.861	47.483	57.592	1.00	23.10
ATOM	5411	O	HOH W 496	19.512	53.157	91.052	1.00	24.70
ATOM	5412	O	HOH W 497	8.653	71.188	54.342	1.00	37.16
ATOM	5413	O	HOH W 498	13.491	29.805	87.885	1.00	32.42
ATOM	5414	O	HOH W 499	28.201	17.967	60.952	1.00	27.80
ATOM	5415	O	HOH W 500	13.916	53.020	42.749	1.00	34.25
ATOM	5416	O	HOH W 501	31.166	39.390	79.679	1.00	24.82
ATOM	5417	O	HOH W 502	17.925	47.317	76.333	1.00	23.97
ATOM	5418	O	HOH W 503	26.920	43.271	47.865	1.00	29.84
ATOM	5419	O	HOH W 504	19.244	18.770	54.825	1.00	29.50
ATOM	5420	O	HOH W 505	7.488	22.912	71.742	1.00	29.50
ATOM	5421	O	HOH W 506	29.694	24.129	79.931	1.00	26.39
ATOM	5422	O	HOH W 507	16.580	53.935	65.413	1.00	23.97
ATOM	5423	O	HOH W 508	47.802	53.813	102.291	1.00	22.45
ATOM	5424	O	HOH W 509	13.313	59.974	67.561	1.00	28.60
ATOM	5425	O	HOH W 510	31.231	48.847	69.951	1.00	40.26
ATOM	5426	O	HOH W 511	25.597	46.283	68.073	1.00	31.31
ATOM	5427	O	HOH W 512	24.049	44.380	68.623	1.00	31.48
ATOM	5428	O	HOH W 513	42.296	47.182	85.395	1.00	32.90
ATOM	5429	O	HOH W 514	0.663	35.872	64.023	1.00	24.98
ATOM	5430	O	HOH W 515	15.871	27.279	83.599	1.00	28.22
ATOM	5431	O	HOH W 516	32.458	35.704	83.058	1.00	36.96
ATOM	5432	O	HOH W 517	10.338	31.191	71.389	1.00	28.72

ATOM	5433	O	HOH W 518	16.441	43.991	73.068	1.00	33.48
ATOM	5434	O	HOH W 519	21.382	44.079	85.715	1.00	36.47
ATOM	5435	O	HOH W 520	-12.204	45.119	45.339	1.00	38.99
ATOM	5436	O	HOH W 521	41.850	50.387	91.395	1.00	25.85
ATOM	5437	O	HOH W 522	38.157	43.711	71.143	1.00	33.79
ATOM	5438	O	HOH W 523	10.857	37.770	74.674	1.00	36.91
ATOM	5439	O	HOH W 524	2.452	57.926	62.203	1.00	29.86
ATOM	5440	O	HOH W 525	31.918	38.240	82.071	1.00	26.60
ATOM	5441	O	HOH W 526	19.394	32.573	51.517	1.00	32.52
ATOM	5442	O	HOH W 527	10.970	64.850	89.305	1.00	26.44
ATOM	5443	O	HOH W 528	15.768	58.372	93.236	1.00	29.74
ATOM	5444	O	HOH W 529	9.811	24.439	85.111	1.00	32.52
ATOM	5445	O	HOH W 530	32.677	43.807	51.972	1.00	41.47
ATOM	5446	O	HOH W 531	3.498	33.335	78.392	1.00	38.95
ATOM	5447	O	HOH W 532	22.765	37.334	45.311	1.00	34.30
ATOM	5448	O	HOH W 533	22.289	62.694	93.625	1.00	28.38
ATOM	5449	O	HOH W 534	18.456	59.233	56.401	1.00	32.51
ATOM	5450	O	HOH W 535	6.870	45.103	78.168	1.00	43.85
ATOM	5451	O	HOH W 536	26.869	66.922	80.584	1.00	33.36
ATOM	5452	O	HOH W 537	28.274	69.424	80.635	1.00	32.22
ATOM	5453	O	HOH W 538	16.644	24.985	84.601	1.00	42.11
ATOM	5454	O	HOH W 539	13.875	66.937	52.609	1.00	39.81
ATOM	5455	O	HOH W 540	35.698	18.768	63.774	1.00	39.08
ATOM	5456	O	HOH W 541	9.604	60.060	65.965	1.00	39.46
ATOM	5457	O	HOH W 542	-19.968	45.560	49.328	1.00	49.42
ATOM	5458	O	HOH W 543	28.747	37.637	80.667	1.00	29.83
ATOM	5459	O	HOH W 544	38.122	41.611	59.189	1.00	42.35
ATOM	5460	O	HOH W 545	36.168	59.639	75.298	1.00	30.81
ATOM	5461	O	HOH W 546	5.231	27.744	55.129	1.00	40.94
ATOM	5462	O	HOH W 547	42.358	42.723	76.149	1.00	33.83
ATOM	5463	O	HOH W 548	5.149	70.452	72.761	1.00	64.99
ATOM	5464	O	HOH W 549	0.638	55.495	62.775	1.00	29.98
ATOM	5465	O	HOH W 550	35.051	47.144	54.258	1.00	36.91
ATOM	5466	O	HOH W 551	20.979	44.359	69.352	1.00	38.48
ATOM	5467	O	HOH W 552	8.699	44.016	58.770	1.00	39.13
ATOM	5468	O	HOH W 553	30.041	49.977	93.866	1.00	50.89
ATOM	5469	O	HOH W 554	14.340	30.254	46.134	1.00	34.10
ATOM	5470	O	HOH W 555	32.981	51.053	96.313	1.00	44.00
ATOM	5471	O	HOH W 556	18.695	43.789	84.698	1.00	31.02
ATOM	5472	O	HOH W 557	30.439	59.776	96.480	1.00	36.06
ATOM	5473	O	HOH W 558	31.888	50.518	46.532	1.00	40.30
ATOM	5474	O	HOH W 559	3.242	29.430	49.193	1.00	33.03
ATOM	5475	O	HOH W 560	29.069	39.191	66.924	1.00	34.29
ATOM	5476	O	HOH W 561	16.772	26.801	47.527	1.00	33.89
ATOM	5477	O	HOH W 562	20.672	46.162	88.583	1.00	46.20
ATOM	5478	O	HOH W 563	13.616	37.635	45.538	1.00	39.19
ATOM	5479	O	HOH W 564	8.770	17.362	84.853	1.00	35.18
ATOM	5480	O	HOH W 565	6.964	71.653	56.756	1.00	38.49
ATOM	5481	O	HOH W 567	32.889	26.311	70.997	1.00	36.28
ATOM	5482	O	HOH W 568	-4.292	32.373	61.200	1.00	42.40
ATOM	5483	O	HOH W 569	20.472	59.008	65.163	1.00	34.22
ATOM	5484	O	HOH W 571	8.439	37.901	87.957	1.00	41.86
ATOM	5485	O	HOH W 572	17.851	36.311	88.778	1.00	46.06
ATOM	5486	O	HOH W 573	37.092	57.002	76.397	1.00	39.65
ATOM	5487	O	HOH W 574	14.564	39.590	89.463	1.00	43.70
ATOM	5488	O	HOH W 575	24.608	41.607	70.049	1.00	50.15
ATOM	5489	O	HOH W 576	28.364	58.768	75.232	1.00	32.28
ATOM	5490	O	HOH W 577	33.944	37.330	52.777	1.00	33.76

```
ATOM   5491  O   HOH W 578       8.396  73.512  56.345  1.00 30.97
ATOM   5492  O   HOH W 579       3.331  27.097  72.842  1.00 45.67
ATOM   5493  O   HOH W 580      15.169  10.135  64.570  1.00 42.16
ATOM   5494  O   HOH W 581      45.191  54.292 101.410  1.00 30.43
ATOM   5495  O   HOH W 582      26.470  57.589  66.563  1.00 39.66
ATOM   5496  O   HOH W 583      10.893  50.001  41.681  1.00 27.20
ATOM   5497  O   HOH W 584      16.236  44.961  46.675  1.00 36.26
ATOM   5498  O   HOH W 585      30.990  43.578  71.047  1.00 45.95
ATOM   5499  O   HOH W 586      10.763  58.258  90.908  1.00 31.78
ATOM   5500  O   HOH W 587      17.447  64.598  52.313  1.00 35.13
ATOM   5501  O   HOH W 588      40.235  53.292  74.530  1.00 51.39
ATOM   5502  O   HOH W 589      18.908  42.622  78.518  1.00 39.32
ATOM   5503  O   HOH W 590      30.298  15.653  74.234  1.00 38.34
ATOM   5504  O   HOH W 591      31.762  51.365  51.354  1.00 47.66
ATOM   5505  O   HOH W 593      20.876  60.082  62.179  1.00 20.00
END
```

09522010 "0121209"

CLAIMS

1. An isolated protein comprising at least a subsequence of the amino acid sequence of leukotriene A_4 (LTA_4) hydrolase and having the corresponding three dimensional form adopted thereof in nature, said subsequence being capable of participating in the control of the an enzymatic pathway, such as the leukotriene cascade, a functionally equivalent part, derivative or conformational analogue thereof.
2. A protein according to claim 1, which is comprised essentially of the amino acid sequence of LTA_4 hydrolase and exhibits the corresponding three-dimensional form adopted thereof in nature, essentially as disclosed in Table 9-11 by the parameters defining atom 1- atom 4876.
3. A protein according to claim 1 or 2, which comprises an enzymatically active site defined in the following table:

	Left wall	**Right wall**
1		Lys608, Asp606, Lys605, Lys354, Thr355
2	Phe356, Phe362	Gln544, Asp573, Lys572, Arg568
3	Val376	Lys565, Arg540, Leu507
4	Ser380, Ser352, Glu348	Pro569
5	Tyr378, Glu348	Arg563, Glu533, Phe536, Arg537, Tyr267
6	Tyr383, Phe314, Glu318, Glu384, Arg326	
7	Gly268, Gly269, Met270	His295, Asn341, Phe340
8	Ser288, His497	Glu325, Asn291

4. A protein according to claim 3, which is an enzyme having a metallohydrolase activity capable of participating in the regulation of enzyme activities in

biochemical pathways, wherein said enzymes have structures similar to the ones defined in claim 3.

5. A protein according to claim 1 or 2, which comprises an enzymatically active site defined by the following amino acids:

Gln136
Ala137
Tyr267
Gly268
Gly269
Met270
Glu271
Val292
His295
Glu296
His299
Glu318
Tyr378
Tyr383
Arg563
Lys565

6. A protein according to claim 1 or 2, which comprises an enzymatically active site defined by the following amino acids:

Gln136
Ala137
Tyr267
Gly268
Gly269
Met270
Glu271
Val292
His295
Glu296
His299
Trp315
Glu318
Val322
Phe362
Val367
Leu369
Pro374

Asp375
Ile372
Ala377
Pro382
Tyr378
Tyr383
Arg563
Lys565

7. A compound which is substantially complementary to a protein according to any one of claims 1-6.

8. A compound according to claim 7, which is substantially complementary to an enzymatically active site of said protein and which is capable of specifically inhibiting said enzymatic activity.

9. A compound according to claim 8, which is an inhibitor of a metallohydrolase enzyme.

10. An isolated complex, which is comprised of a protein according to claim 1-6 and a complementary compound according to any one of claims 7-9, wherein the three-dimensional structure of LTA_4 hydrolase is essentially as disclosed in Tables 9-11 by the parameters defining atom 1- atom 4876, or a functionally equivalent part, derivative or conformational analogue of such a complex.

11. A complex according to claim 10, wherein the protein complexed with LTA_4 hydrolase is the inhibitor bestatin, thiolamine or hydroxamic acid, wherein the three-dimensional structure of said inhibitor is essentially as disclosed in Tables 9-11, or a functionally equivalent part, derivative or conformational analogue of such a complex.

12. Use of a protein according to any one of claims 1-6, a compound according to any one of claims 7-9 or a complex according to claim 10 or 11 in drug design, such as in molecular modeling, direct structure-based design and/or combinatorial chemistry.

13. Use according to claim 12, wherein said drug is for the treatment and/or prevention of disorders involving acute and chronic inflammatory and/or

allergic symtoms, said disorder being selected from the group consisting of arthritis, inflammatory bowel disease (IBD), psoriasis, chronic obstructive pulmonary disease (COPD), and acquired immune deficiency syndrome (AIDS).

14. Use according to claim 12, wherein said drug is for the treatment and/or prevention of proliferative disorders, such as neoplasias and/or cancer.

15. Use according to claim 12, wherein said drug is for the treatment and/or prevention of disorders caused by the lethal factor of *Bacillus anthracis,* e.g. anthrax.

16. A method for screening LTA_4 hydrolase analogues that mimic at least a part of the three dimensional structure of the LTA_4 hydrolase molecule, which comprises the steps of

(a) producing a multiplicity of analogue structures of LTA_4 hydrolase and

(b) selecting an analogue structure, wherein the three-dimensional configuration and spatial arrangement of one or more enzymatically active sites and/or binding sites of said LTA_4 hydrolase remain substantially preserved, said LTA_4 hydrolase being defined by the three-dimensional form adopted thereof in nature, preferably as disclosed in Tables 9-11 the by parameters defining atom 1- atom 4876.

17. A method according to claim 16, wherein an analogue exhibiting an enzymatic activity, such as an epoxide hydrolase and/or aminopeptidase activity, is selected.

18. A method according to claim 16 or 17, wherein an enzymatic inhibitor complementary to the amino acids defined in any one of claims 4, 5 or 6 is screened for.

19. An analogue obtainable by the method according to any one of claims 16-18.

20. An analogue according to claim 19, which exhibits an increased catalytic activity when compared to the naturally occurring form of LTA_4 hydrolase, such as defined in Tables 9-11 by parameters of atom 1- atom 4876.

21. A method for screening LTA_4 hydrolase binding compounds complementary to a region of LTA_4 hydrolase, preferably an enzymatically active site thereof, which comprises the steps of

(a) producing a multiplicity of possible complementary structures and

(b) selecting a structure, wherein the three-dimensional configuration and spatial arrangement of regions involved in binding to LTA_4 hydrolase remain substantially preserved, which selection is based on the three-dimensional structure of LTA_4 hydrolase, and/or LTA_4 hydrolase complexed to an inhibitor thereof, in a form adopted thereof in nature, such as defined in Tables 9-11.

22. A method according to claim 21, wherein a general metallohydrolase inhibitor is selected, which is capable of inhibiting an enzyme belonging to the M1 family.

23. A method according to claim 21, wherein an inhibitor of the epoxide hydrolase activity and/or aminopeptidase activity of LTA_4 hydrolase or of LTC_4 synthases is selected.

24. A method according to claim 21, wherein a compound capable of antagonizing LTB_4 receptor binding of a cell is selected.

25. A compound obtainable by the method according to any one of claims 21-24.

26. A method of engineering a protein, which method comprises the steps of

-identification of a suitable set of mutations based on the structure of LTA_4 hydrolase;

-generation of a library of genes which contains the suitable sequence variations;

-selection of clones encoding the LTA_4 hydrolase analogues with a desired activity function;

wherein said desired activity is the capability of efficiently producing an organic compound of interest.

27.A method according to claim 26, wherein the specified property is the suicidal mode of action of LTA_4 hydrolase.

ABSTRACT

The present invention relates to an isolated leukotriene A_4 (LTA_4) hydrolase, which LTA_4 hydrolase is present in its naturally ocurring three dimensional form. It is the first three-dimensional structure of any protein component of the leukotriene cascade and enables a description of the structural basis and molecular mechanisms for the two catalytic activities of LTA4 hydrolase. Further, the invention also relates to LTA_4 hydrolase complexed withan inhibitor. The structural information provided by the present invention will make possible rational design of enzyme inhibitors, which may be developed into clinically useful anti-inflammatory drugs

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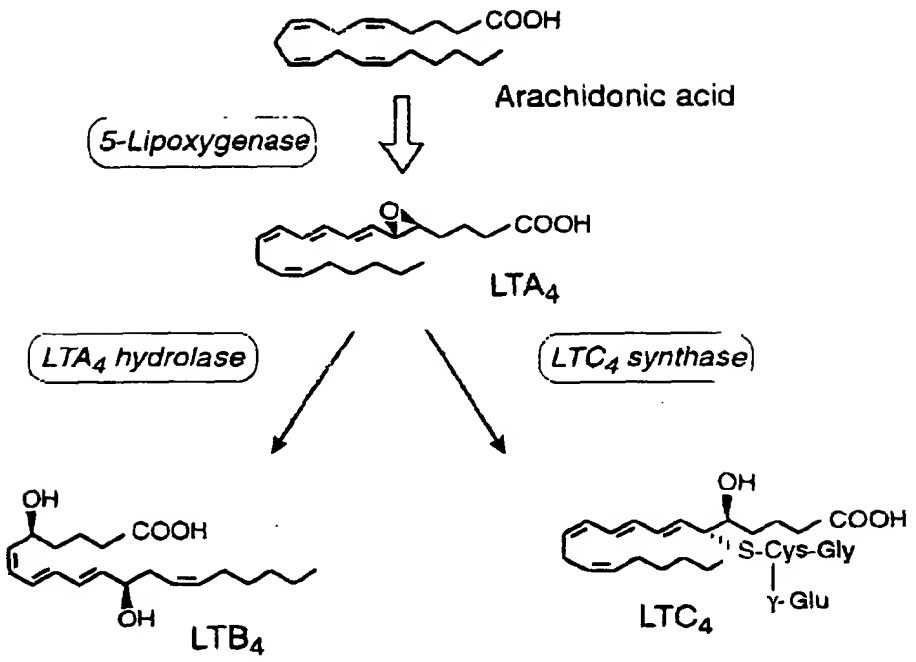
Figure 1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γ-Glu
LTC4

Figure 2

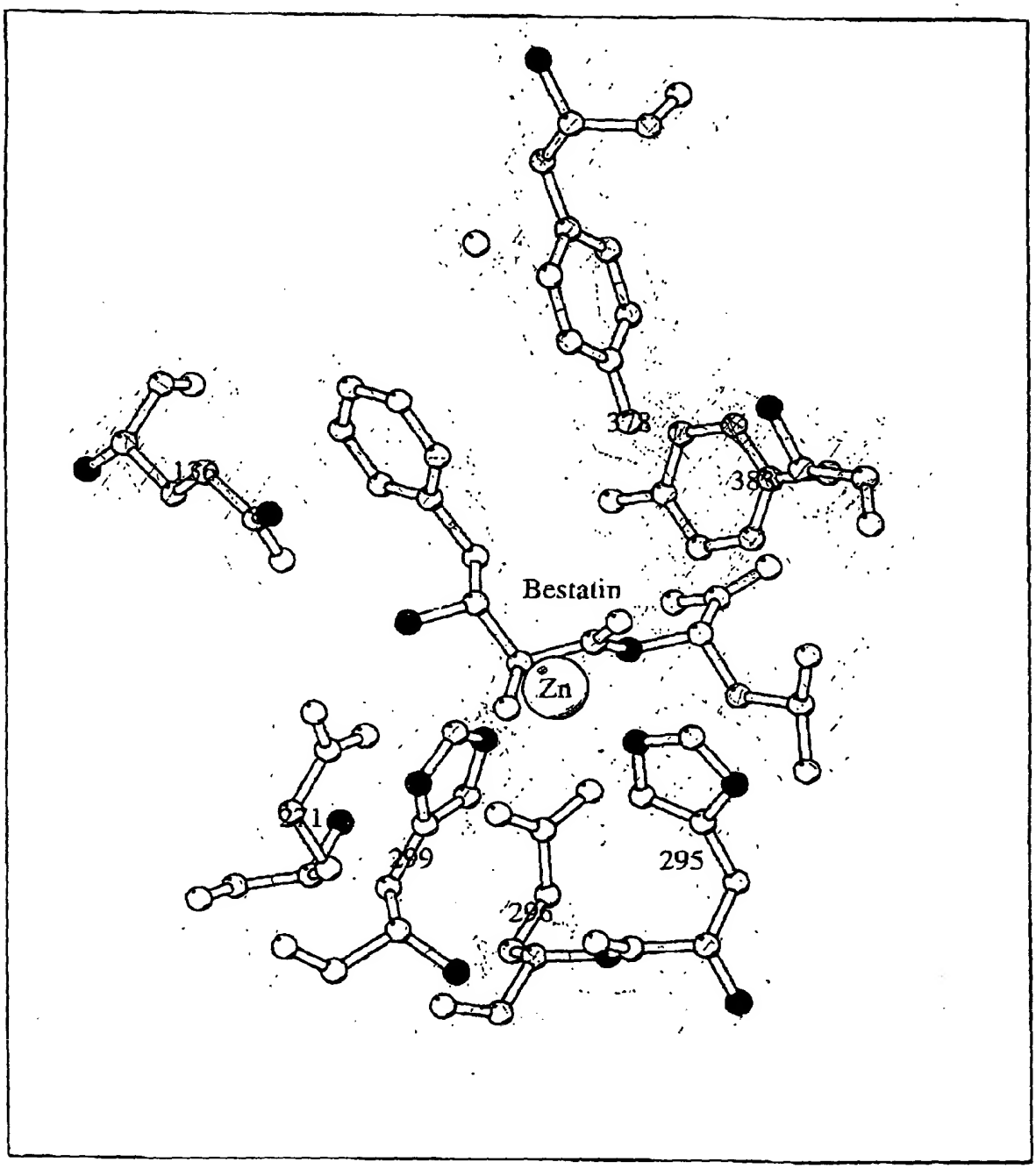


Figure 3

Figure 4a

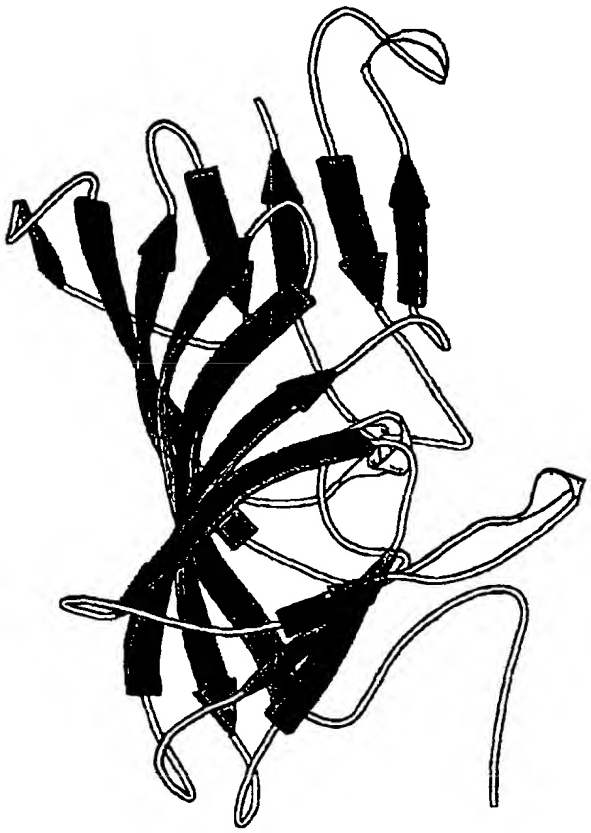
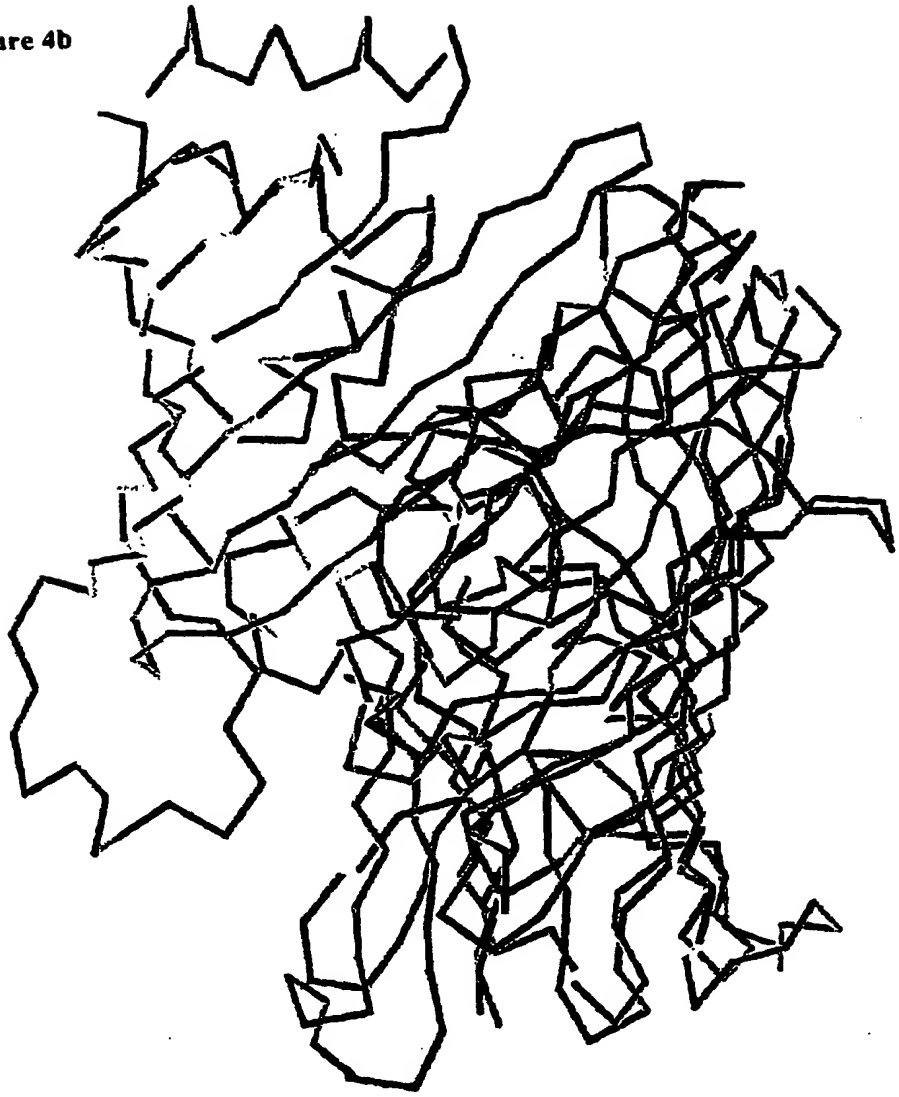


Figure 4b



SUBSTITUTE SHEET (RULE 26)

Figure 5a

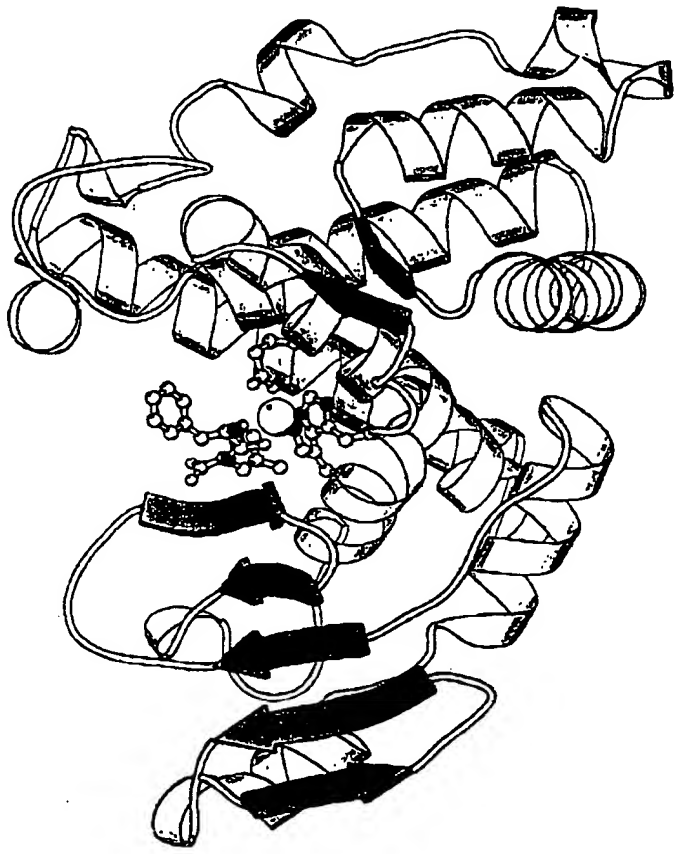


Figure 5b

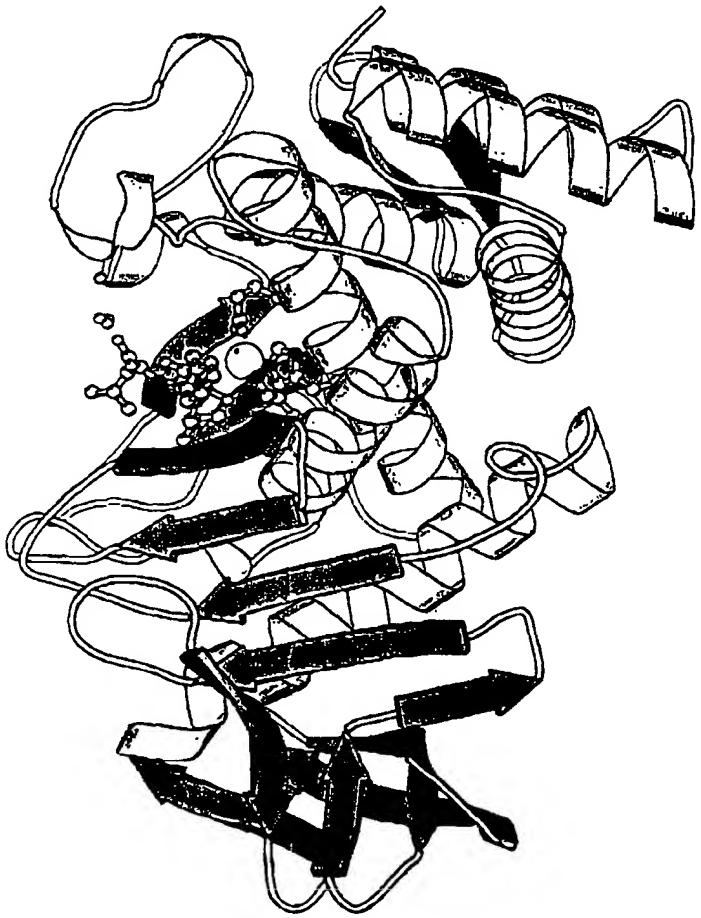


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Figure 6

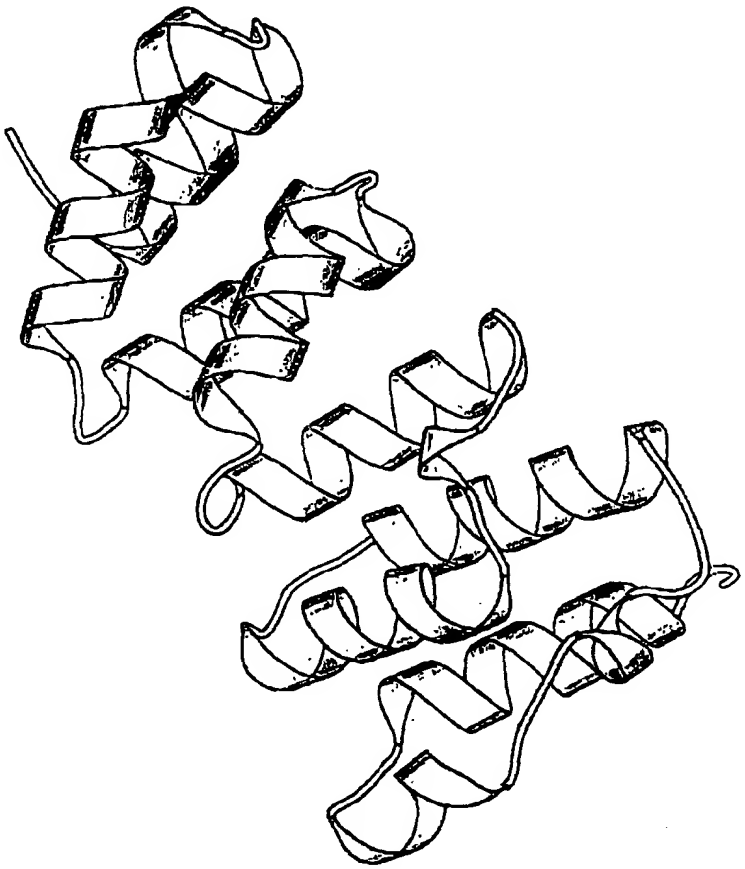
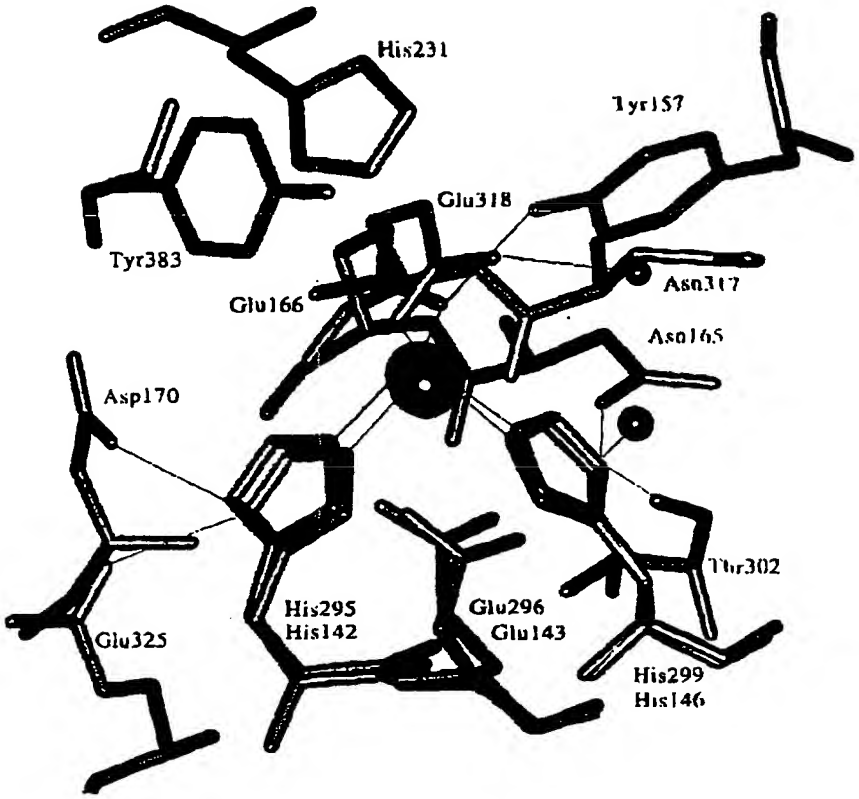


Figure 7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His299
His146

Figure 8a

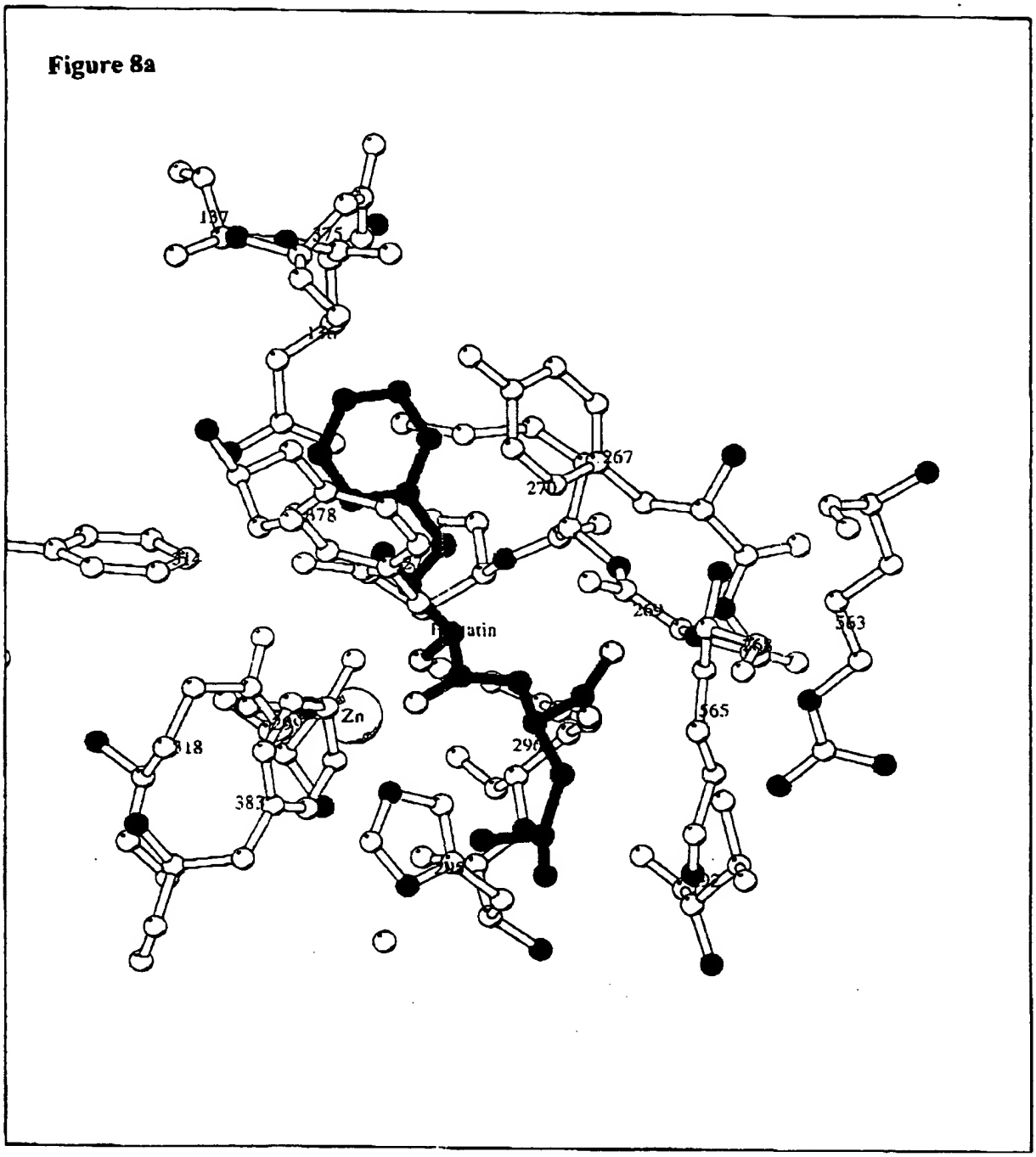
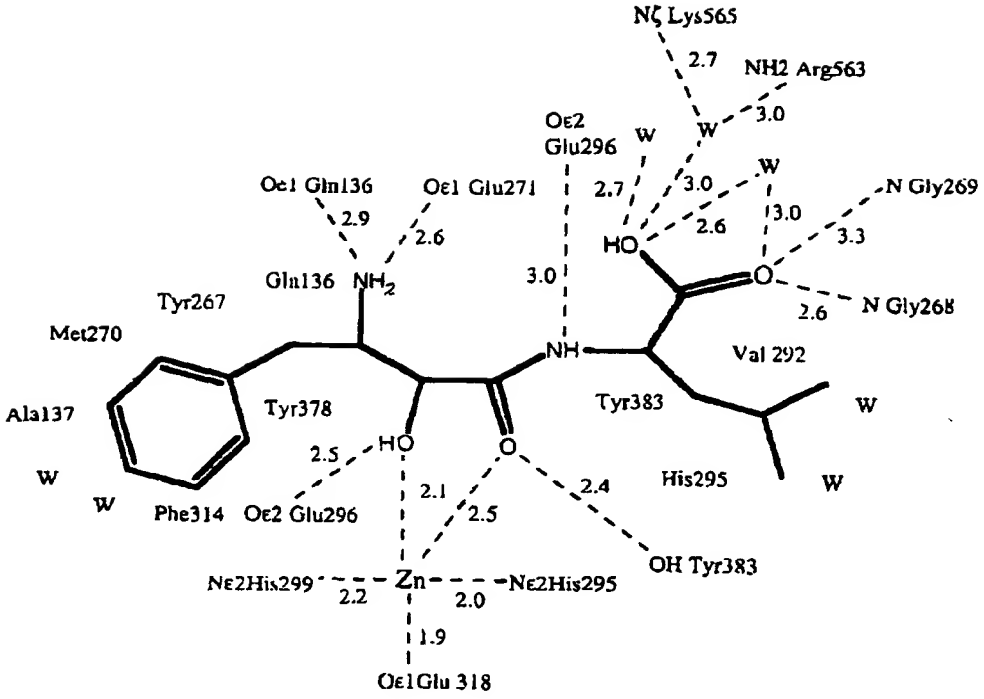


Figure 8b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Met270
NH
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Tyr383
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W
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Oε1Glu 318

Figure 9a

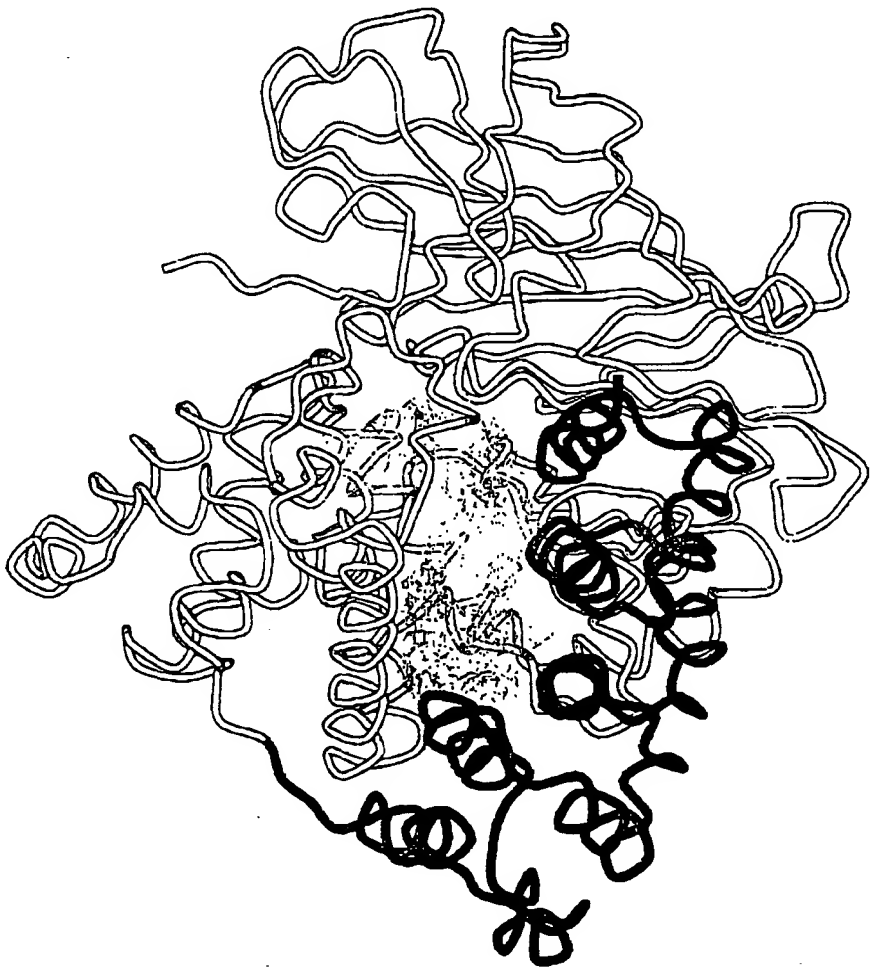
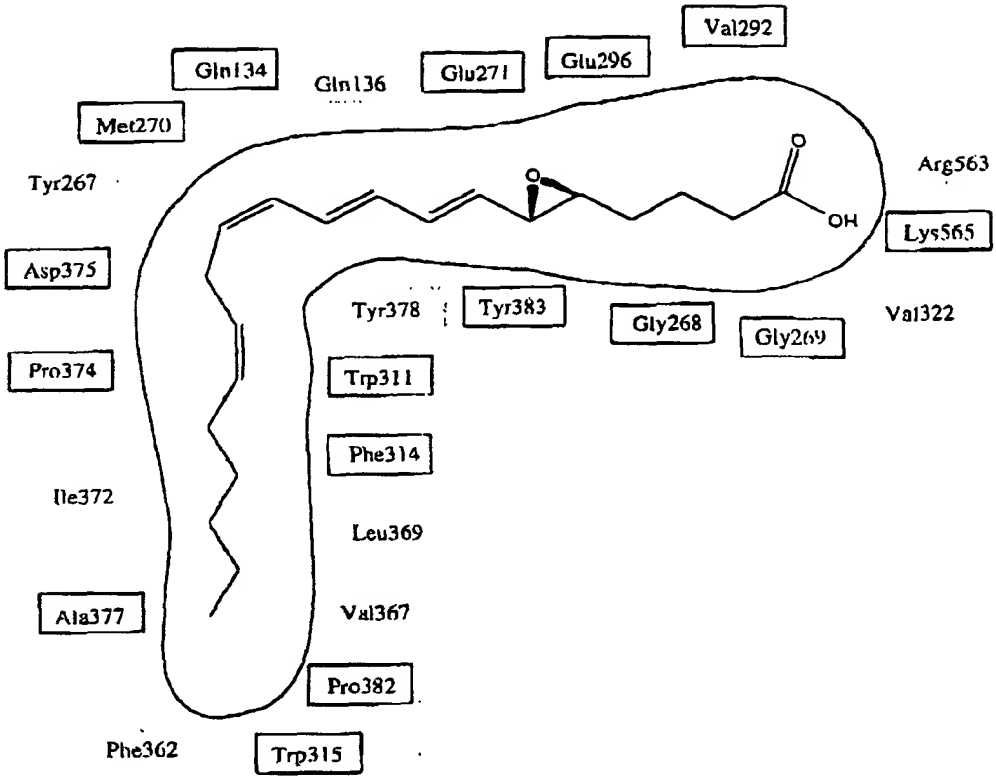


Figure 9b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